

ANNUAL REPORT

2021




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

Dr. V. S. Rajpai VSM
Executive Registrar
SGPGIMS, Lucknow



ANNUAL REPORT 2021

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


Lt Col Varun Bajpai VSM
Executive Registrar
SGPGIMS, Lucknow

Annual Report 2021

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Director's Message



I am delighted to present before you the “Annual Report” of the Institute for the year 2021. The report consists of all crucial events, and accomplishments achieved during the year. The Institute since its foundation has grown immensely in the areas of new Departments and Techniques. The year 2021 witnessed improved systems and facilities despite the second wave of COVID-19. The year was not only about excellent hospital services but also about unity, dedication, and several Departments coming together to fight against one of the deadliest waves of COVID-19. The Institute is working rigorously towards improving Patient care, Teaching and Research. All Departmental, Hospital, Teaching, Research, Infrastructure activities and accomplishments are mentioned in the “Annual Report” for all to read and cherish the accomplishments of our very own Institute.

I admire the efforts put in by each and every member of the Institute’s family and special mention to all the committee members for putting up the “Annual Report” together for the year 2021.

(Prof. R K Dhiman)

Director, SGPGI

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

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INSTITUTE BODY MEMBERS, 2021

1. Shri R.K.Tiwari, Chief Secretary, IAS, Govt of U.P. and President, SGPGIMS, Lucknow
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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, "TENI", Member of Parliament (MP, Lakhimpur Khiri, U.P)
19. Shri Raghvendra Pratap Singh, Member of Legislative Assembly (MLA), 101, Tilak Marg, dalibagh Bahumanzila Mantri Awasthi, Lucknow- 226001
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. Prof. Afzal Azim, Executive Registrar, SGPGIMS, Lucknow



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GOVERNING BODY MEMBERS, 2021


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5. Shri Alok Kumar, IAS, Additional Chief Secretary, Govt. Of U.P., Medical Education Department, Lucknow
6. Dr. N. C. Prajapati, Director General Medical Education, U.P., Lucknow
7. Prof. M. K. Mitra, 432/11, Kala Kankar Colony Yojna, Old Hyderabad, Lucknow
8. Prof. S. P. Singh, Principal, M.L.N. Medical College, Allahabad
9. Prof. Ganesh Kumar, Principal, B.R.D. Medical College, Gorakhpur
10. Dr. Nitin Somalal Shah, M.S. Surgeon, Ahmadabad
11. Prof. Afzal Azim, Department of CCM, SGPGIMS, Lucknow
12. Prof. Sunil Kumar, Department of Radiology, SGPGIMS, Lucknow
13. Dr. Mohan Gurjar, Additional Professor, Department of CCM, SGPGIMS, Lucknow
14. Dr. Rajesh Harswardhan, Additional Professor, Department of Radiology, SGPGIMS, Lucknow



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ACADEMIC BOARD MEMBERS, 2021

1. Prof. R. K. Dhiman, Director/Chairman, Academic Board
2. Dr. N. C. Prajapati, Officiating Director General, Medical Educating & Training U.P., Lucknow
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
8. Prof. Eesh Bhatia, Head Department of Endocrinology, SGPGI
9. Prof. Sunil Kumar, Head Department of Endocrinology, SGPGI
10. Prof. Sunil Pradhan, Head Department of Neurology, SGPGI
11. Prof. Anil Agarwal, Head Department of Anesthesiology, SGPGI
12. Prof. Aneesh Srivastava, Head of Department of Urology, SGPGI
13. Prof. Raj Kumar, Head Department of Neurosurgery, SGPGI
14. Prof. Shubha R. Phadke, Head Department of Medical Genetics, SGPGI
15. Prof. Shaleen Kumar, Head Department of Radiotherapy, SGPGI
16. Prof. R. K. Chaudhary, Head Department of Transfusion Medical, SGPGI
17. Prof. S. Gambhir, Head Department of Nuclear Medicine, SGPGI
18. Prof. Vikash Kanaujia, Head of Department of Ophthalmology, SGPGI
19. Prof. Nirmal Gupta, Head Department of CVTS, SGPGI
20. Prof. Seema Sharma, Head Department of Pathology, SGPGI
21. Prof. Amita Aggarwal, Head Department of Clinical Immunology & Rheumatology, SGPGI
22. Prof. Gaurav Agarwal, Head Department of Endosurgery, SGPGI
23. Prof. Adity Kapoor, Head Department of Cardiology, SGPGI
24. Prof. Banani Poddar, Head Department of Critical Care Medicine, SGPGI
25. Prof. U. C. Ghoshal, Head Department of Gastroenterology, SGPGI
26. Prof. Rajiv Agarwal, Head Department of Plastic Surgery and Burns, SGPGI
27. Prof. Mandaki Pradhan, Head Department of Material & Reproductive Health, SGPGI
28. Prof. Uttam Singh, Head Biostatistics & Health Informatics, SGPGI
29. Prof. Rajesh Kashyap, Head Department of Hematology, SGPGI
30. Prof. Ujjal Poddar, Head Department of Pediatric Gastroenterology, SGPGI
31. Prof. Narayan Prasad, Head Department of Nephrology, SGPGI
32. Prof. Ujjala Ghoshal, Head Department of Microbiology, SGPGI
33. Prof. Swasti Tiwari, Head Department of Molecular Medicine, SGPGI
34. Prof. Alok Nath, Head, Head Department of Pulmonary Medicine, SGPGI
35. Prof. Basant Kumar, Head Department of Pediatric Surgical Super-specialities, SGPGI
36. Prof. Rajesh Harsvardhan, Head Department of Hospital Administration, SGPGI
37. Prof. Kirti M Naranje, Head Department of Neonatology, SGPGI
38. Prof. Afzal Azim, Executive Registrar, SGPGI
39. Prof. U. Ghoshal, Faculty Incharge Research, SGPGI
40. Prof. S. Gambhir, Nodal Officer, College of Medical Technology, SGPGI
41. Prof. P.K. Pradhan, Nodal Officer, School of Telemedicine and Biomedical Informatics, SGPGI
42. Prof. Sanjay Dhiraj, Nodal Officer, College of Nursing, SGPGI



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Picture Gallery



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Covid Vaccination Drive (January 2021)



Healthcare and front line workers getting vaccinated at SGPGI Vaccination centre

Institute's 25th Convocation (9th January, 2021)



Chief Guest of the Function, Dr. Mammen Chandy, Director, Tata Memorial Centre (TMC), Kolkata addressing the august audience



Words of wisdom by Hon'ble Governor, UP and Visitor, SGPGI, Smt. Anandi Ben Patel

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Inauguration of Department of Hepatology (16th February, 2021)



Cabinet Minister, Medical Education, Shri Sushil Khanna inaugurating the Department of Hepatology




Prof. S. K. Sarin, Director, ILBS addressing the gathering through video conferencing

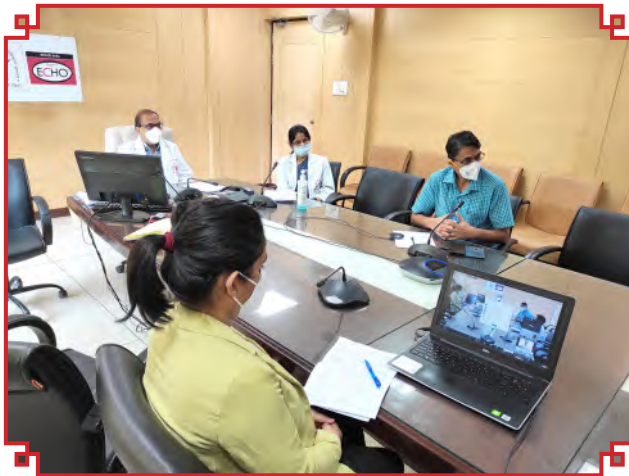
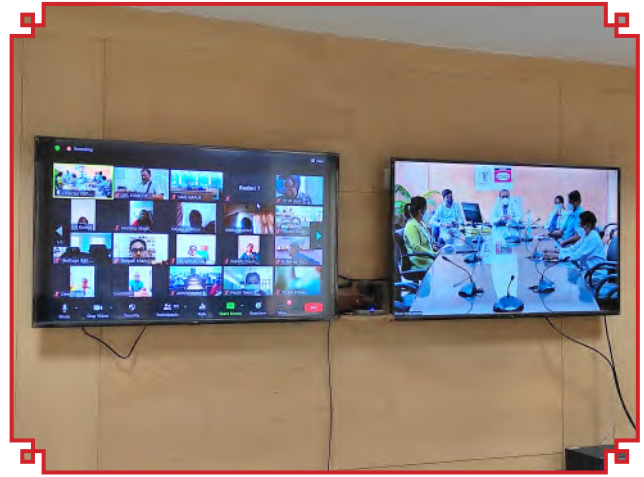
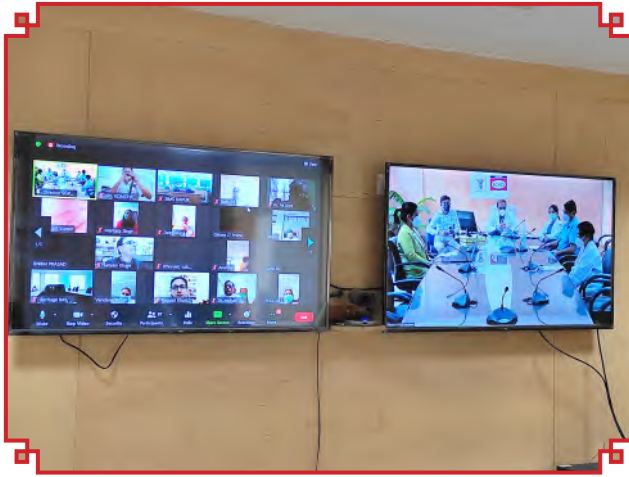
Post Covid OPD (7th June, 2021)



Inauguration of Post Covid OPD by the Director, Prof. R. K. Dhiman for consultation related to various health issues after recovery from Covid


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Seminar on various aspects of Health Care and Medical Ethics (26th June, 2021)



Experts deliberating on "Covid Vaccination: Challenges and Education for Vaccine Hesitancy"

Institute 26th Convocation (27th August, 2021)



Hon'ble President of India, Shri Ram Nath Kovind blessing the degree recipients

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e-office inauguration at SGPGIMS (1st November, 2021)



Prof. R. K. Dhiman inaugurates the e-office application to make official work transparent and paper less

PM Care PSA Oxygen Plant (7th October, 2021)



Hon'ble Minister, Medical Education Shri Suresh Khanna Ji, inaugurating the 1000 Litre capacity Oxygen Plant

Institute's 2nd Research Day (13th December, 2021)



Director and Faculty, SGPGI having a look at the posters displayed on the Research day

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Institute's 38th Foundation Day (14th December, 2021)



Director Prof R. K. Dhiman presenting the institute's progress report



Felicitation of the award winners by the Chief Secretary UP and President SGPGI, Shri R. K. Tiwari

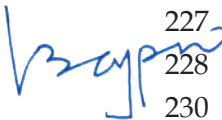
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DEPARTMENT OF ANESTHESIOLOGY

STAFF

Name of Faculty Members:

- | | |
|--------------------------------------|--|
| 1. P K Singh, MD | Professor (Retired on 31st December 2021) |
| 2. Anil Agarwal, MD | Professor (Retired on 30th November 2021) |
| 3. S P Ambesh, MD | Professor and Head |
| 4. Prabhat Tewari, MD | Professor |
| 5. Mukesh Tripathi, MD | Professor (On Deputation since 21st Jan 2019) |
| 6. Shashi Srivastava, MD | Professor |
| 7. Sanjay Dhiraaj, MD | Professor |
| 8. Devendra Gupta, MD,PDCC | Professor |
| 9. Puneet Goyal, MD,DM | Professor |
| 10. Aruna Bharti, MD | Professor |
| 11. Sandeep Sahu, MD, DNB,PDCC | Professor |
| 12. Aarti Agarwal, MD | Additional Professor |
| 13. Sujeet K Singh Gautam, MD, PDCC | Additional Professor |
| 14. Sanjay Kumar, MD, PDCC | Additional Professor |
| 15. Ashish Kannaujia, MD | Additional Professor |
| 16. Amit Rastogi, MD, PDCC | Additional Professor |
| 17. Sandeep Khuba, MD, PDCC | Additional Professor |
| 18. Rudrashish Haldar, MD, DNB, PDCC | Additional Professor |
| 19. Ruchi Verma, MD, PDCC | Associate Professor |
| 20. Chetna Shamshery, MD, DNB, PDCC | Associate Professor |
| 21. Divya Srivastava, MD, PDCC | Associate Professor |
| 22. Tapas Singh, MD, PDCC | Associate Professor |
| 23. Rafat Shamim, MD, PDCC | Associate Professor |
| 24. Ganpat Prasad, MD | Associate Professor |
| 25. Vansh Priya, MD, | Associate Professor |
| 26. Prateek Singh Bais,MD | Associate Professor |
| 27. Suruchi Ambasta, MD | Associate Professor |
| 28. Nidhi Singh, MD | Assistant Professor
(Contractual since 7th July 2021) |
| 29. Abhishek Kumar, MD, PDCC | Assistant Professor
(Contractual since 6 April 2022)) |

Honours and Awards:

Dr Ruchi Verma: Outstanding Women Researcher Award

Dr Sandeep Sahu: INSC Research Excellence Award



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WORKSHOPS/CMEs/SEMINARS Organised:

1. Airway Certification Course
2. Capacity Building Programs for Adult and Paediatric patients COVID management
3. Workshop on “Innovation and Intellectual Property right”

Services : Departmental Activities

Procedures Done	Year 2021	Year 2020	Year 2019
General Anaesthesia	5975	3073	803
Spinal Anaesthesia	708	472	1054
Nerve Blocks	262	119	408
Central Venous lines	735	350	640
Percutaneous Tracheostomy	38	30	108
Pulmonary function tests	516	30	570
Acute Pain Service	1247	670	1202
Anesth performed outside the operation theatres e.g card cath, interventional radiology, DSA, MRI, endoscopy, bronchoscopy, etc	1900	650	1700

Teaching and Training:

Resident /Student

Senior Resident	24
PDAF	10
Junior Resident	31

Publications:

1. Ambesh SP, Dubey M. Effect of intramuscular dexmedetomidine administration before extubation on post-extubation haemodynamics, postoperative sedation, and analgesic requirements: A double-blind placebo-controlled study. *Asian Journal of Anesthesiology* 2021;59:102-110.
2. Bhargava T, Sahu S, Singh TK, et al. Comparison of palonosetron and ondansetron in preventing postoperative nausea and vomiting in renal transplantation recipients: a randomized clinical trial. *Braz J Anesthesiol.* 2021 Aug 16;S0104-0014(21)00316-X.
3. Sam FA, Sahu S, Ponnappan TK, et al. Potential applicability of perioperative TEG to assess the coagulopathies in liver-related renal transplantation. *Saudia Journal of Kidney Diseases and Transplantation* 2021;32:1043-53
4. Gautam S, Singh P, Gopal VG, Agarwal A, Kumar S, Khuba S, Shamsheery S. Efficacy of Radiofrequency Lesioning for Chronic Spinal Pain: A Systematic Review. *Indian Journal of Pain* 2021; 35: 105-22.
5. Gautam S, Agarwal A, Das PK, Khuba S, Kumar S. Prevention of epidural catheter migration: A comparative evaluation of two tunneling techniques. *Korean J Anesthesiol* 2021;74:59-64.
6. Paul M, Rastogi A, Chatterje A, Agarwal A, Mishra P, Khan A. Comparative evaluation of propofol and combination of propofol-dexmedetomidine in adjunct with topical airway anesthesia for rigid bronchoscopy: A randomized double-blinded prospective study. *Ann Card Anaesth* 2021;24:49-55.

7. Khuba S, Kumar S, Gautam S. Ultrasound-guided pulsed radiofrequency lesioning of suprascapular nerve for the treatment of frozen shoulder pain. *Int. J. Med. Sci. Curr. Res* 2021; 4(2):787-795
8. Kumar S, Khuba S, Gautam S. Association of myofascial pain in patients with thoracolumbar scoliosis, kyphoscoliosis or spinal deformity attending a tertiary care hospital in Uttar Pradesh, India. *J Evid Based Med Healthc* 2021;8(27):2392-2398.
9. Khuba S, Kumar S., Gautam, S. Radiofrequency denervation of genicular nerves for advanced knee osteoarthritis pain: a retrospective observational study. *International Journal of Medical Arts*, 2021; 3(3): 1576-1583.
10. Khuba S, Kumar S, Gautam S. Ultrasound-guided pulsed radiofrequency lesioning of suprascapular nerve for the treatment of frozen shoulder pain. *Int. J. Med. Sci. Curr. Res* 2021; 4(2):787-795
11. Kumar S, Khuba S, Gautam S. Association of myofascial pain in patients with thoracolumbar scoliosis, kyphoscoliosis or spinal deformity attending a tertiary care hospital in Uttar Pradesh, India. *J Evid Based Med Healthc* 2021;8(27):2392-2398.
12. Khuba S, Kumar S., Gautam, S. Radiofrequency denervation of genicular nerves for advanced knee osteoarthritis pain: a retrospective observational study. *International Journal of Medical Arts*, 2021; 3(3): 1576-1583.
13. Srivastava U, Dwivedi Y, Verma S, Kannaujia AK. Sequential organ failure assessment score for predicting outcome of severely ill obstetric patients admitted to intensive care unit. *J ObstetAnaesth Crit Care* 2021;11:96-100.
14. Kannaujia A, Haldar R, Shamim R. Comparative evaluation of intubation performances using two different barrier devices used in the COVID-19 era: A manikin based pilot study. *Saudi J Anaesth.* 2021;15:86-92.
15. Paul M, Rastogi A, Chatterje A, Agarwal A, Mishra P, Khan A. Comparative evaluation of propofol and combination of propofol-dexmedetomidine in adjunct with topical airway anesthesia for rigid bronchoscopy: A randomized double-blinded prospective study. *Ann Card Anaesth*2021;24:49-55..
16. Kasinath MP, Rastogi A, Priya V, Singh TK, Mishra P, Pant KC. Comparison of airway ultrasound indices and clinical assessment for the prediction of difficult laryngoscopy in elective surgical patients: A prospective observational study. *Anesth Essays Res* 2021;15:51-3
17. Bhargava T, Kumar A, Rastogi A, Srivastava D, Singh TK. A Simple Modification of Sphenopalatine Ganglion Block for Treatment of Postdural Puncture Headache: A Case Series *Anesth Essays Res* 2021;15:143-5.
18. V Priya, R Shamim, A Rastogi. Perioperative management of Diabetes- A survey of current practices amongst Indian Anaesthesiologists. *J of Anaesth and Cin Pharmacology*
19. Haldar R, Mandelia A, Mishra P, Mishra A, Siddiqui Y. Central Venous Catheter-Related Infectious Complications in Pediatric Surgical Patients: A Single-Center Experience. *J Pediatr Intensive Care.* 2021 Feb 17;11(3):240-246
20. Kannaujia A, Haldar R, Shamim R, et al . Comparative evaluation of intubation performances using two different barrier devices used in the COVID-19 era: A manikin based pilot study. *Saudi J Anaesth.* 2021 Apr-Jun;15(2):86-92
21. Shamsbery C, Kumar VV, Agarwal A. Comparative Evaluation of Efficacy of Fluoroscopy and Ultrasound for Iliopsoas Block: A Randomised Trial. *Turk J AnaesthesiolReanim.* 2021 Aug;49(4):284-291

22. Vijayakumar V, Agarwal A, Shamsbery C. Intractable anal pain in B-cell acute lymphocytic leukemia patients: treatment options. *Korean J Pain*. 2019 Jan;32(1):55-56
23. Singh P, Agarwal A, Shamsbery C. Comment on an Article by Aleanakian et al. Titled “Effectiveness, Safety, and Predictive Potential in Ultrasound-Guided Stellate Ganglion Blockades (SGB) for the Treatment of Sympathetically Maintained Pain”. *Pain Pract*. 2021 Jun;21(5):602.
24. Bhargava T, Sahu S, Singh TK, Srivastava D. Comparison of palonosetron and ondansetron in preventing postoperative nausea and vomiting in renal transplantation recipients: a randomized clinical trial. *Braz J Anesthesiol*. 2021 Aug 16:S0104-0014(21)00316
25. Bhargava T, Kumar A, Rastogi A, Srivastava D. A Simple Modification of Sphenopalatine Ganglion Block for Treatment of Postdural Puncture Headache: A Case Series. *Anesth Essays Res*. 2021 Jan-Mar;15(1):143-145.
26. Chandra A, Rao N, Srivastava D, Mishra P. Better peri dialytic blood pressure control using carvedilol in end-stage renal disease patients on twice weekly maintenance hemodialysis
27. *Int Urol Nephrol* 2021 May;53(5):1007-1014
28. Khan H, Srivastava R, Tripathi N, Uraiya D, Singh A, Verma R. Level of anxiety and depression among health-care professionals amidst of coronavirus disease: A web-based survey from India. *J Edu Health Promot* 2021;10:408.
29. Parashar S, Bais P, Agrawal A, Rai S. Comparative analysis of different techniques of airway management in view of hemodynamic stability and postoperative complication in patients undergoing atlanto-axial joint dislocation surgery. *Academia Anesthesiologica International*. January- June 2021
30. Siddiqui T, Shamim R, Patel SS. A Novel Approved Drug Exhibiting Potent In vitro Activity against Gram-Positive Bacterial Isolates from Patients Admitted in Intensive Care Units. *J Clin of Diagn Res*. 2021
31. Singh A, Prasad G, Mishra P, Vishwakarma K, Shamim R Lessons learned from blunt trauma abdomen: Surgical experience in level I trauma centre. *Turk J Surg* 2021; 37 (3): 277-285.
32. Srivastava U, Kannaujia AK, Ambasta S. Sequential organ failure assessment score for predicting outcome of severely ill obstetric patients admitted to intensive care unit. *J Obstet Anaesth Crit Care* 2021; 11:96-100
33. Tripathi SS, Ambasta S, Agarwal A. Pre- and Post-Operative Care of Children with Cleft Lip and Palate. *SSR Inst. Int. J. Life Sci.*, 2021; 7(1): 2742-2748

Book Chapters:

1. Fundamentals of Pediatric Neuroanesthesia. ISBN 9789811633768
2. Srivastava D, Dubey B. Anaesthetic Management of Pheochromocytoma. *Endocrine Surgery. Endocrine Surgery: A South Asian Perspective*. ISBN 9780429197338
3. Srivastava D, Chandra A, Solanli SL. Perioperative Critical care Management of Renal transplant Surgeries. *Perioperative Critical Care*. ISBN 9789390020508
4. First Aid Module for Community 2019, an Initiative of WHO, MOHFW-India as Expert and contributor for capacity building of common people in First Aid.
5. Sahu S. Nutritional Therapy in ICU. *Textbook of Drugs in Anaesthesia and Critical Care*. ISBN:9789387964259
6. Sahu S. Antibiotics Therapy in Intensive care unit. *Drugs in Anaesthesia and Critical Care*. ISBN:9789387964259



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Patent Wall:

1. Dr Ashish Kannaujia: Smartphone compatible flexible bronchoscope. Patent filed (Application number.202211037144)
2. Dr Chetna Shamsbery. Airway for edentulous patients, currently undergoing 1st examination report. Patent filed (Application number:.201611001718)

A handwritten signature in blue ink, appearing to read 'Varun Bajpai', is positioned above the printed name of the Executive Registrar.

Lt Col Varun Bajpai VSM
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SGPGIMS,Lucknow

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 |

Awards and recognitions

Dr Prabhaker Mishra

- Received the best paper award at 2nd Research Day of SGPGI in Associate Professor Group of Basic science category held on 13th December 2021.

Invited sessions and chairpersons/lectures for Conferences: 2021 : Nil

Membership of Societies

Membership of professional bodies funded by Institute.

Dr Uttam Singh

- Indian Society for Medical Statistics
- Indian Association for the Study of Population
- Epidemiology Foundation of India

Dr Prabhaker Mishra

- Indian Society for Medical Statistics
- Indian Association for the Study of Population
- Indian Association of Preventive and Social Medicine
- Indian Public Health Association.
- Epidemiology Foundation of India
- International Epidemiological Association
- Indian Society for Probability and Statistics
- American Public Health Association
- Eastern Geographical Society

Dr Anup Kumar

- Indian Society for Medical Statistics
- Indian Association for the Study of Population
- Epidemiology Foundation of India
- International Epidemiological Association

Dr Jai Kishun

- Indian Society for Medical Statistics



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- Indian Association for the Study of Population
- Epidemiology Foundation of India
- International Epidemiological Association
- Indian Society for Probability and Statistics

Teaching Workshops/ CME's organized 2021 : Nil

Services: Data analysis support, Statistical consultancy, and Hospital Information Services to the Institute.

Services	Year 2019	Year 2020	Year 2021
Statistical Consultancy	1600	1000	1250
Data analysis support	1250	1200	1200
Thesis support for MD	40	35	40
DM/MCh Projects	50	40	50
Teaching to the Students (Basic course)	150	110	140
Short Summer Training course (No of students)	02	02	0
*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.

Research Projects including Extramural Research Grants:

1. Dashboard of COVID-19 **Funding:** 5.65 Lakhs by ICMR, New Delhi (PI: Dr Anup Kumar), **Status:** Ongoing.

Summary Report:

Due to COVID-19, all the covid portal are providing the information separately and through this project trying to develop a dashboard where all the portal URL and information could be available.

Publications:

Indexed Journal:

1. Vignesh S, Prasad SN, Singh V, Neyaz Z, Phadke RV, Mehrotra A, Mishra P. Angiographic analysis on posterior fossa hemorrhages and vascular malformations beyond aneurysms by CT angiography and digital subtraction angiography. Egyptian Journal of Neurosurgery. 2021;37(1):1-9.
2. Lal H, Yadav P, Kaul A, Prasad R, Akhtar J, Mishra P, Singh A. Role of Computed Tomography in Estimation of Residual Renal Function at One Year after Donor Nephrectomy: Comparison with Nuclear Scintigraphy. Saudi Journal of Kidney Diseases and Transplantation. 2021;1;32(4):993.
3. Baghel SS, Keshri AK, Mishra P, Marak R, Manogaran RS, Verma PK, Srivastava AK, Kumar R, Mathialagan A, Bhuskute G, Dubey AK. The Spectrum of Invasive Fungal Sinusitis in COVID-19 Patients: Experience from a Tertiary Care Referral Center in Northern India. Journal of Fungi. 2021: 24;8(3):223.

4. 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)*. 2021.
5. Rai S, Mishra P, Ghoshal UC. Survival analysis: A primer for the clinician scientists. *Indian Journal of Gastroenterology*. 2021;40(5):541-9.
6. 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. *J Caring Sci*. 2021 Nov 14;11(1):46-55.
7. Halemani 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* 2021;26(1):114-122
8. Hashim Z, Nath A, Khan A, Neyaz Z, Marak RSK, Prasanth AP, Tiwari A, Srivastava S, Agarwal V, Saxena S, Tripathy N, Azim A, Gupta M, Misra DP, Mishra P et. al. COVID-19-Associated Pulmonary Aspergillosis in India and New Insights Into Its Development and Mortality. *SSRN Electronic Journal* 2021.
9. Rahul, Haldeniya K, Singh A, Bhatt N, Mishra P, Singh R, Saxena R. Determinants of curative resection in incidental gallbladder carcinoma with special reference to timing of referral. *Annals of Hepato-Biliary-Pancreatic Surgery* 25(4):492-499.
10. Mishra P, Singh RK, Nath A, Pande S, Agarwal A, Sanjeev OP, Gupta D, Singh P, Ghatak T, Hashim Z, Khare V, Khuba S, Rastogi A, Dhiman RK. A novel epidemiological scoring system for the prediction of mortality in COVID-19 patients. *Trans R Soc Trop Med Hyg*. 2021.doi: 10.1093/trstmh/tra108. PMID: 34388241; PMCID: PMC8385975.
11. Pandey G, Singh H, Chaturvedi S, Hatti M, Kumar A, Mishra R, Mishra P, Krishna VP, Bhadauria A, Mohindra S, Misra DP, Saraswat VA, Agarwal V. Utility of neutrophil CD64 in distinguishing bacterial infection from inflammation in severe alcoholic hepatitis fulfilling SIRS criteria. *Sci Rep*. 2021; 5: 11(1):19726. doi: 10.1038/s41598-021-99276-y. PMID: 34611256; PMCID: PMC8492738.
12. Singh A, Prasad G, Vishwakarma V, Mishra P, Shamim R. Lessons learned from blunt trauma abdomen: Surgical experience in level I trauma centre. *Turk J Surg* 2021; 37(3) : 277-285.
13. Gupta M, Ish P, Chakrabarti S, Sen MK, Mishra P, Suri JC. Diagnostic accuracy and feasibility of portable sleep monitoring in patients with obstructive sleep apnea: Re-exploring the utility in the current COVID-19 pandemic. *Monaldi Arch Chest Dis*. 2021. doi: 10.4081/monaldi.2021. PMID: 34523322.
14. Agarwal R, Jain VK, Singh S, Charlotte A, Kanaujia V, Mishra P, Sharma K. Segmented retinal analysis in pituitary adenoma with chiasmal compression: A prospective comparative study. *Indian J Ophthalmol*. 2021;69(9):2378-2384. doi: 10.4103/ijo.IJO_2086_20. PMID: 34427226.
15. Keshav K, Sharma P, Kumar A, Baghel A, Kaustubh K, Huda N, Mishra P. Changing practices of delivering orthopedic and coronavirus disease 2019 care: Outcome of a pan-India survey. *J Bone Joint Dis* 2021; 36:27-32.
16. Kumar S, Khuba S, Gautam S, Agarwal A, Vittobaraju M, Aggarwal A, Awal S, Mishra P. Association of myofascial pain in patients with thoracolumbar scoliosis, kyphoscoliosis or spinal deformity attending a tertiary care hospital in Uttar Pradesh, India. *J Evid Based Med Healthc* 2021;8(27):2392-2398.
17. Srivastava A, Mathialagan A, Manogaran RS, Mishra P. et al. Comparative Craniometrics Study of the Lateral Skull Base in the Adult and Pediatric Population. *J Postgrad Med Edu Res* 2021;55(3):119-125.

18. Haldeniya RK, Singh A, Mishra P et al. Does timing of completion radical cholecystectomy determine the survival outcome in incidental carcinoma gallbladder: A single center retrospective analysis. *Ann Hepatobiliary PancreatSurg* 2021;25 Suppl 1:3-4.
19. Vishwakarma K, Khakhla DH, Ambereen A, Rawat SK, Mishra P, Shukla B. Impact of COVID-19 on oral and maxillofacial surgery practice in India: A national survey. *Natl J Maxillofac Surg.* 2021;12(2):219-226.
20. Agarwal R, Pal S, Sharma K, Jain VK, Mishra P. Fungal infections of the orbit: The present scenario in a developing country. *IP Int J Ocul Oncol Oculoplasty*2021;7(1):49-54.
21. Kasinath MPR, Rastogi A, Priya V, Singh TK, Mishra P, Pant KC. Comparison of Airway Ultrasound Indices and Clinical Assessment for the Prediction of Difficult Laryngoscopy in Elective Surgical Patients: A Prospective Observational Study. *Anesth Essays Res.* 2021;15(1):51-56.
22. Misra U. K., Kalita J., Singh V. K., Kapoor A., Tripathi A., Mishra P. Rest or 30-Min Walk as Exercise Intervention (RESTOREX) in Myasthenia Gravis: A Randomized Controlled Trial. *European Neurology* 2021, 84(2), 1-7.
23. Rao SN, Chandra A, Tiwari P, Mishra P. Development and Validation of a Novel Food-frequency Questionnaire for Hemodialysis Patients in Lucknow, India. *Indian J Nephrol.* 2021 May-Jun;31(3):276-282. PMID: 34376943; PMCID: PMC8330646.
24. Ora M., Nazar A. H., Mishra P., Barai S., Arya A., Pradhan P. K., Gambhir S. Clinical outcome of patients with differentiated thyroid cancer and raised antithyroglobulin antibody levels: a retrospective study. *Thyroid Research* 2021, 14(1), 1-10.
25. Uniyal R., Chhirolya R., Tripathi A., Mishra P., Paliwal V. K. Is new daily persistent headache a fallout of somatization? An observational study. *Neurological Sciences* 2021, 1-7.
26. Keshav K, Baghel A, Kumar V, Neradi D, Kaustubh K, Mishra P. Is Minimally Invasive Plating Osteosynthesis Better Than Conventional Open Plating for Humeral Shaft Fractures? A Systematic Review and Meta-Analysis of Comparative Studies. *Indian J Orthop.* 2021 9;55(Suppl 2):283-303.
27. Kishun J, Kumar A, Singh U. Correlates of Cigarette Smoking Among Adolescents in India. *Indian J Community Med.* 2021;46(3):389-395.
28. Kumar A, Kishun J, Singh U, Gaur D, Mishra P, Pandey CM. Use of appropriate statistical tools in biomedical research: Current trend & status. *Indian J Med Res.* 2021 Apr;157(4):353-357. PMID: 37282397.
29. Sharma AR, Srivastava AK, Singh S, Das KK, Mishra P, Bhaisora KS, et al. Does socioeconomic status have an association with cranio-vertebral anomalies: A step toward healing the curse!. *J PediatrNeurosci*2021;16:44-8.
30. Gupta A, Dubey K, Mishra P, Singh N, Tiwari S. Association of insulin growth factors and IGFBP-3 in maternal blood and cord blood of low birthweight babies. *International Journal of Recent Scientific Research* 2021.12 (6), 13-18.
31. Srivastava A, Kumar S, Agarwal A, Khetan D, Katharia R, Mishra P, et al. Evaluation of efficacy of Valsalva for attenuating needle puncture pain in first time nonremunerated voluntary plateletpheresis donors: A prospective, randomized controlled trial. *Asian J Transfus Sci* 2021;15:68-74.
32. Ora M, Nazar AH, Mishra P, Barai S, Arya A, Pradhan PK, Gambhir S. Factors predicting the risk of biochemical incomplete response in well-differentiated thyroid cancer after total thyroidectomy. *Nucl Med Commun.* 2021; 1;42(11):1187-1194.

33. Agrawal S., Mishra P., Mishra A, Agarwal G. A Simple Risk Scoring System for Predicting Recurrence in Women with Locally Advanced Breast Cancer (LABC) Treated with Neoadjuvant Chemotherapy (NACT). Journal of Advances in Medicine and Medical Research 2021, 33(13), 27-37.
34. Soni N, Ora M, Aher PY, Mishra P, Maheshwarappa RP, Priya S, Graham MM. Role of FDG PET/CT for detection of primary tumor in patients with extracervical metastases from carcinoma of unknown primary, Clinical Imaging. 2021: 78; 262-270.
35. Gaurav K, Yadav S, Kumar S, Mishra A, Godbole MM, Singh U, Mishra SK. Assessment of iodine nutrition of schoolchildren in Gonda, India, indicates improvement and effectivity of salt iodisation. Public Health Nutr. 2021 Dec;24(18):6211-6217.

Non-Indexed Journal

36. Goel P, Sahu A, Layek M, Khanna R, Mishra P. Impact of completeness of revascularization on long-term outcomes in patients with multivessel disease undergoing PCI: CR versus IR outcomes in multivessel CAD. Asia Intervention. 2021;7(1):35-40.
37. Rai B, Mishra P, Asif MH and Tiwari S. Identification of Crucial Degs and Hub Genes in Focal Segmental Glomerulosclerosis: A Bioinformatics Study. International Journal of Applied Biology and Pharmaceutical Technology.2021: 12; 420-460.
38. Mathialagan A., Singh S., Jaiswal A. K., Manogaran R. S., Mishra P., Keshri A. K. Is the Tradition of Nasal Packing Just an Illusion of Permanence or a Necessary Evil?. Indian Journal of Neurosurgery 2021.

Chapter(s) in Book(s): Nil

Visiting Professors : Nil

Department Highlights:

1. To manages and maintain the Hospital Information System (HIS) and patient care data on various servers in the institute.
2. Implementation and manage fully functional HIS to cater the patient care activities under this system.
3. Manage campus wide internet, email facilities and HIS system in in Residential areas, hostels, MRA, guest house through Wi-Fi.
4. 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

Department recently have taken following initiatives:

1. **Payment Gateway in HIS at Patient portal:** Online transaction facility on patient portal of SGPGI is in the process of implementation. By using this facility, patients will be able to deposit amounts electronically. Regarding this a memorandum of understanding (MOU) between SGPGI and State bank of India are in very final stage for signature.
2. **HR module for leave management:** Leave management has been started in HIS and presently it is in the stage of pilot project. By using this employee can apply and receive sanction orders electronically.

3. **E Office:** Department started e office, which is a software product of NIC, and as a pilot project it is being used at the department of biostatistics and health informatics and other some 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. **PACS (Picture Archive and Communication System):** Lab/imaging equipment's of various departments have been integrated with HIS. 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. During the COVID pandemic, this facility is very much useful in patients care and management.



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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
10. Prof PK Goel	Superannuated, 1 st September 2021

Awards and Recognitions

Dr. Ankit Sahu, International associate fellow for European society of cardiology (ESC), European society of Cardiology

Dr. Roopali Khanna, Treasurer UP Chapter CSI, UP Chapter Cardiological Society of India

Dr Sudeep Kumar, Elected as Vice president of UP chapter of Cardiological Society of India, Cardiological Society of India

Dr Aditya Kapoor, Nominated as national convenor for Sudden cardiac arrest, Revive Heart foundation, Cardiology Mater Class Scroll of Honor, Public Health Foundation of India

Invited sessions and chairpersons/lectures for Conferences

Dr. Ankit Sahu

- QFR® and coronary artery disease' from Oxford medical center (Virtual)
- Mid term NIC Lucknow

Dr. Roopali Khanna

- National CSI, Hyderabad
- Mid term NIC Lucknow

Dr Sudeep Kumar

- UPCSI
- Mid term NIC Lucknow

Dr Naveen Garg

- TCT, Orlando, USA



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- CARDICON, Patna
- Euro PCR, Paris
- Cardiology & Echocardiography Update Lucknow
- PCSI, New Delhi
- CSI, Hyderabad
- Mid term NIC Lucknow
- CME Certificate Course Chelaram Diabetes Institute, Pune

Dr. Satyendra Tewari

- National CSI-Hyderabad
- Mid term NIC Lucknow

Dr Aditya Kapoor

- IHRS Annual Conference, Mumbai
- Annual conference of CSI, Hyderabad
- Indian Society of Electrocardiology, Chennai
- Annual conference of CSI, Chennai
- Mid term NIC Lucknow

Membership of Societies**Membership of professional bodies funded by Institute****Dr. 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



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

Teaching Workshops/ CME's organized 2021

1. Mechanical CPR workshop demonstration Sept 2021 (5 hours)
2. TAVI simulation on 'Real-time TAVR experience Oct (2 hours)
3. CTO intervention' for exhibition during TCT South Asia-2021 on 30th July 2021
4. Echo training workshop Oct 2021

Service

Year-wise available clinical data (last three years 2019, 2020, 2021) for department of Cardiology

S. No	Parameters	2019	2020	2021
1	Number of New patients in OPD	9997	2558	5437
2	Number of Old/ Follow-up patients in OPD	40792	12417	26085
3	Total patients in OPD	50789	14975	31522
4	Total number of patients admitted (IPD)	5168	1981	3295
5	Total number of cath lab. Procedures done	5478	1996	3575
	a) Coronary Angiograms	2758	812	1623
	b) PTCA	1641	762	1257
	c) Peripheral Angiograms & other procedures	131	35	52
	d) Other procedures (Valvuloplasty, Umbrella closures, IVC filter, EP, etc.	409	119	185
	e) Intra aortic Balloon pump insertions	2	2	1
	f) PPM implanted.	393	204	311
	g) Others	144	62	146
6.	Total number of :			
	TMT	898	365	420
	Echo	25946	8448	16370
	Stress echo	5	1	4
	Holter Recordings	366	149	302
	ECG	15739	4290	18396

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): 8

Number of students who passed in final year examination (PG): 8



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Research projects

Completed:

1. Serum Gamma Glutamyltransferase (GGT) in Coronary Artery Disease: Exploring the Asian Indian Connection, 2021, Funding : Departmental (PI: Dr Aditya Kapoor), Status: Published Ann Card Anaesth. 2022 Oct-Dec;25(4):408-413. Summary report: In this study of 200 Indian patients with documented CAD, serum levels of GGT were noted to have an independent correlation with angiographic severity of CAD, as assessed by SYNTAX and Gensini scores. While the existing evidence seems biologically plausible, more studies are needed to explore the potential role of this marker for predicting disease burden in patients with CAD.
2. Evaluation of cardiovascular risk factors in Sheehan's syndrome, 2021, Funding : SGPGI Intramural grant (PI: Dr Subhash Yadav, Co-PI:Naveen Garg), Summary report:Sheehan's syndrome patients on standard replacement therapy except Growth Hormone replacement have increased cardiovascular risk including hypertension, dyslipidemia, central obesity, inflammatory markers like hsCRP and IL-6 and atherosclerotic markers like CIMT and may lead to increased mortality.
3. Clinical significance of epicardial fat in suspected angina pectoris: An observational study, 2021, Funding : Departmental (PI: Dr Naveen Garg), Status: Completed Summary of results: Epicardial fat is significantly associated with presence of CAD, metabolic syndrome, visceral fat, CIMT and FMD. CT measured epicardial fat may be included with CT based CAD lesion assessment to screen patients with suspected angina pectoris
4. Prospective Case Control Study of Objective Cardiac and Vascular Changes in Pheochromocytoma and Paraganglioma and Their Reversal Following Curative Surgery, Funding: Intramural (Dr Roopali Khanna), Summary report: Patients with Pheochromocytoma and paraganglioma (PPGLs) had significantly higher mean blood pressure, dilated left ventricles with diastolic dysfunction and longitudinal strain values when compared with the control groups at baseline. After alpha blockade and 6 months post surgery, there was marked reduction in the mean LVEDD, LVEDV, LVESV, and normalization of E/A ratio ($p < 0.001$) in the PPGL patients. There was also marked improvement in the global longitudinal strain as seen on serial speckle tracking echocardiography.
5. Evaluation of Monocyte/Lymphocyte ratio (MLR), CRP/Albumin ratio (CAR) and Glycated Hemoglobin (HbA1c) to predict the severity of coronary artery disease in Non-diabetic Patients: Correlation with SYNTAX SCORE (SS), 2021, Funding : Departmental (PI: Dr Satyendra Tewari), Status: Completed
6. Echocardiographic Strain imaging to assess immediate and short term effects of successful percutaneous balloon mitral valvotomy on left atrial and Right Ventricular Mechanics, 2021, Funding : Departmental (PI: Dr Sudeep Kumar), Summary report: Strain imaging for left atrium (LA) and right ventricle (RV) has been used as a novel assessment tool to evaluate LA and RV functional status. However, their implication is not fully established regarding the effect of percutaneous balloon mitral valvotomy (BMV) in patients with rheumatic severe mitral stenosis (MS). In the present study, we sought to assess the Global LA [Office1] Strain and RV Strain [Office2] in this patient population, and found that Global LA and RV strain can be considered as an indicator of respectively left atrial and Right ventricular function, and its improvement may be taken as a good indicator of successful BMV.
7. Demographic and angiographic profile of coronary artery disease in women presenting with chest pain : 15 years retrospective observational study, 2021, Funding : Departmental (PI: Dr Roopali Khanna), Status: Completed Summary report: Total of 10,408 women who underwent

coronary angiography due to suspected CAD were included in the study. The mean age was 56.7 ± 9.6 years. Obstructive CAD was present in 6823 (65.6%) women with Single vessel disease (SVD) detected in 3092 (49.2 %), double vessel disease (DVD) in 2019 (32.1 %) and triple vessel disease (TVD) in 1511 (24 %). Left main disease was seen in 201(3.2%) women. On multivariate logistic regression analysis age ≥ 55 years, Diabetes mellitus, smoking, tobacco chewing and dyslipidemia were found to be independent risk predictors for obstructive coronary artery disease (CAD). The present study provides the largest contemporary data for Indian women undergoing coronary angiography.

8. Echocardiographic assesment of autologous pericardial tricupsid pulmonary valve and right ventricle function in post TOF repair patients - a midterm follow up study, Funding : Departmental (PI: Dr Roopali Khanna), Status: Completed Summary report: This is a retrospective analysis of cases operated between December 2008 and December 2021 with untreated autologous pericardium for creating a competent pulmonary valve following a transannular patch. All the subjects were in NYHA class I at the time of follow up without any signs and symptoms of right heart failure. Untreated autologous pericardium functioned well when it was used to create a competent pulmonary valve at midterm.
9. Non-Invasive assessment of pulmonary artery and annulus size by echocardiography and cardiac CT angiography and its correlation to invasive assessment by conventional catheter angiography in tetralogy of fallot patients undergoing corrective surgery: a retrospective analysi, 2021. Funding : Departmental (PI: Dr Ankt Sahu), Status: Completed
10. Comparative assessment of impact of COVID-19 national epidemic waves over utilization patterns, management protocols and short term outcomes of digital consultation services (e-OPD) for cardiovascular diseases during 2020-2021, Funding : Departmental (PI: Dr Ankt Sahu), Status: Completed

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 COVID 19 Infected ST-Elevation Myocardial Infarction in INDIA (COSTA INDIA) 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
 - a. 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
 - a. 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. Mahindru S, Pande S, Malhotra P, Thukral A, Kotwal AS, Gupta RP, Garg N, Kapoor A, Agarwal SK. Mechanical prosthetic valve thrombosis in current era: 5-year follow-up. Indian J Thorac Cardiovasc Surg. 2021; 37 (2): 140-146.
2. Khanna R, Chandra D, Yadav S, Sahu A, Singh N, Kumar S, Garg N, Tewari S, Kapoor A, Pradhan M, Goel PK. Maternal and fetal outcomes in pregnant females with rheumatic heart disease. Indian Heart J. 2021; 73 (2):185-189.
3. Kapoor A, Sahu A. Hydroxychloroquine and Azithromycin Use in COVID-19 Era and Cardiovascular Concerns: Current Perspective. Journal of the Practice of Cardiovascular Sciences. 2021;7 (1), 78-82
4. Sahu A, Kumar S Pulmonary hypertension - a distinct perspective Journal of Evidence Based Medicine and Healthcare 2021

5. Goel PK, Liladhar Vora P, Sahu AK, Khanna R. Left main coronary artery diameter – A correlation between intravascular ultrasound and quantitative coronary angiography. Indian Heart Journal 2021
6. Garg N, Raghuvanshi AS, Kapoor A, Tewari S, Khanna R, Kumar S, Sahu A, Goel PK. Vascular dysfunction and its recovery after transradial coronary angioplasty- A serial observational study. Indian Heart J. 2021; 73 (6): 697-703.
7. Goel PK, Khanna R, Sahu A. Procedural and short-term clinical outcomes post-PCI using newer generation ultrathin sirolimus-eluting stent with biodegradable polymer coating in real-world population. Indian Heart Journal 2021
8. Rout SR, Kumar S, Kapoor A, Sahu A, Khanna R, Garg N, Tewari S. Echocardiographic strain imaging to assess immediate and short-term effects of successful percutaneous balloon mitral valvotomy on left atrial and right ventricular mechanics. Indian Heart Journal 2021, 73: S 23
9. Khandelwal V, Kapoor A, Kazmi D, Sinha A, Kashyap S, Khanna R, Kumar S, Garg N, Tewari S, Sahu A, Goel P. Exploring the association of fibrinogen and CRP with the clinical spectrum of CAD and periprocedural outcomes in patients undergoing percutaneous coronary interventions. Ann Card Anaesth. 2022; 25 (1): 34-40.
10. Kapoor A, Baronia AK, Azim A, Agarwal G, Prasad N, Mishra R, Saraswat VA. Breathability and Safety Testing of Personal Protective Equipment: The “Human-Comfort” Factor Remains Undefined. Indian Journal of Critical Care Medicine Indian J Crit Care Med 2021 Jan;25(1):12-15. doi: 10.5005/jp-journals-10071-23598.
11. Kaushik A, Kapoor A, Dabadghao P, Khanna R, Kumar S, Garg N, Tewari S, Goel PK, Sinha A. Use of strain, strain rate, tissue velocity imaging, and endothelial function for early detection of cardiovascular involvement in young diabetics. Ann PediatrCardiol. 2021;14 (1): 1-9.
12. Dalal, A Kapoor. Implications of ATPCI study on trimetazidine use in clinical practice. J Int J Cardio Cardiovasc Res 2021;1(3); 79-82
13. Kaushik A, Kapoor A, Agarwal SK, Pande S, Kashyap S, Sinha A, Khanna R, Kumar S, Garg N, Tewari S, Goel PK. Effect of statin on perioperative myocardial injury in isolated valve surgery. Asian Cardiovasc Thorac Ann. 2021 Jun;29(5):369-375.

Chapter(s) in Book(s)

1. Left Main Coronary Artery Interventions Aditya Kapoor, Kunal Singh Cardiac Catheterization and Imaging 2021, Jaypee Brothers Medical Publishers
2. Why is CTO opening worthy? What is the current status and guideline? Pravin K. Goel, Ankit Kumar Sahu 6th ed Cardiological society of India (CSI) cardiology update – 2021 Evangel Publishing
3. Artificial Intelligence in Cardiology, Soham Choudhary, Aditya Kapoor Cardiological society of India (CSI) Book 2021, Jaypee Brothers Medical Publishers
4. Secondary Prevention in ACS; Sudeep Kumar, Smarak Ranjan Rout, Aditya Kapoor IndiaPoint of Care, Reed Elsevier India Pvt. Ltd 2021
5. Advances in Statin Therapy and Beyond Anindya Ghosh, Aditya Kapoor. Statin Therapy & Beyond in CVD-2021, Jaypee Brothers Medical Publishers 2021
6. Tachycardiomyopathy: recognition and management, Danish Kazmi, Aditya Kapoor, Sudeep Kumar, Heart Failure Management, Reed Elsevier India Pvt. Ltd 2021
7. Hypertension Guidelines : Sudeep Kumar, Smarak Ranjan Rout, Aditya Kapoor Handbook of Hypertension: Knowledge Bridge Pvt. Ltd.2021



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8. Statins in Heart Failure, Aditya Kapoor, Rajiv Agarwala Lipid Association of India: Clinical Lipidology 2021

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 2021

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DEPARTMENT OF CLINICAL IMMUNOLOGY AND RHEUMATOLOGY

1. Amita Aggarwal, DM	Professor & Head
2. Able Lawrence, DM	Professor
3. Vikas Agarwal, DM	Professor
4. Durga Prasanna Misra, DM	Associate Professor
5. Latika Gupta, DM	Assistant Professor (Resigned on 11.1.0.2021)
6. Dr. Koshy Nithin Thomas, DM	Assistant Professor (Adhoc) Joined on 14.08.2021
7. Dr. Naveen R, DM	Assistant Professor (Adhoc) Joined on 14.08.2021

Awards and Honours

Amita Aggarwal

- Chairperson Project evaluation committee on Allergy and Immunology, Indian Council of Medical Research
- Co-Chairperson of GOI statutory body for recombinant and genetically modified (RCGM) products
- National coordinator of the teaching program of DNB trainees in Rheumatology
- Member DBT task force on chronic disease biology
- Member SERB Committee for CRG and IRPHA project for COVID 19
- Member SERB task force on Innovation in antibody engineering
- Member of DBT task force for The Innovative Young Biotechnologist Award (IYBA), National Biosciences and TATA awards
- Member of Scientific Advisory group on Analgesics and Rheumatic drugs of DCGI, 2015-2022
- Member Scientific advisory committee, National Institute of Immunology, Delhi
- Selection committee member of sectional committee on Medicine of The Indian Academy of Science
- Member, Standing National Committee on Medicines of ICMR

Durga P Misra

- Member of the Scientific Committee, IRACON 2021.
- Member of the Steering Committee, ATACC-RA Consortium, 2021
- Member of the Executive Committee, Indian Rheumatology Association (2021-2023)

Residents, Research fellows

1. First prize for best paper in Basic sciences was awarded to Dr Upendra Rathore, DM student for his paper "Tacrolimus with tadalafil is effective in suppressing Th17- IL17 pathway in Takayasu arteritis"
2. Runner up prize for paper in Clinical and Therapeutic sciences to Dr Naveen R, adhoc faculty member for his paper " Predictors of long-term functional outcomes of Enthesitis Related Arthritis (ERA) Category of Juvenile Idiopathic Arthritis (JIA) in Adulthood: A Single Centre Experience from a tertiary care hospital



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Invited lectures by faculty members

Amita Aggarwal:

- 'Women leaders in Rheumatology: a personal journey' at American college of Rheumatology annual conference Nov 2021.
- Panel discussion on 'Pediatric Rheumatology Care in Resource-Limited Settings and PReS Global Task Force' at American college of Rheumatology annual conference Nov 2021
- 'Biologics in Pediatric Rheumatology: Indian Scenario' at Asia-Pacific league of association (APLAR) 2021
- 'Gut microbiome in chronic inflammatory diseases' at SGPGI in the workshop on NGS & sequencing Nov 27, 2021.
- 'Osteoclast biology' at SGPGI in the course on membrane biology and fusion. Nov 13, 2021.
- 'When to suspect immunological disease' by Indian Academy of Pediatrics, Raipur on Oct 30, 2021.
- 'Soluble and cellular urinary biomarkers in SLE' at the annual meeting of TCS, PGIMER Oct 29, 2021.
- 'Intervention trial' by SCB medical college on their 75th Jubilee celebration Oct 25, 2021.
- 'Basics of autoinflammation' at the annual conference of Pediatric Rheumatology Society of India Oct 1, 2021.
- 'Case control studies by SCB medical college on their 75th Jubilee celebration Aug 23, 2021.
- 'B cells and autoantibodies by Neurology Society of India in July 23, 2021

Vikas Agarwal:

- Two invited lectures (Virtual) at Asia-Pacific league against Rheumatism meeting in Kyoto, Japan in August 2021
- Indian Rheumatology Association meeting in Hyderabad, India in December 2021
- Srilankan Rheumatology Association meeting in Colombo, Srilanka in November 2021
- Indian Rheumatology Association meeting in Hyderabad, India in December 2021
- Two invited lectures at CME on "Gut Health and CKD", on August 1, 2021.

Conference Presentation

1. Aggarwal A, Majumder S, Guleria S. Synovial Fluid IL-36 γ in Patients with Enthesitis Related Arthritis (ERA) Correlates with Disease Activity and Leads to Production of IL-6 by Fibroblast Like Synoviocytes [abstract]. Arthritis Rheumatol. 2021; 73 (suppl 10).
2. Gowda N, Samuel A, Yadav A, Aggarwal A, Balakrishnan A. Impact on Caregivers of Patients with Juvenile Idiopathic Arthritis: A Hospital-based Study from India [abstract]. Arthritis Rheumatol. 2021; 73 (suppl 10).
3. Chatterjee R, Balakrishnan A, Kharbanda R, Rathore U, Gupta L, Misra D, Agarwal V, Aggarwal A, Lawrence A. Renal Involvement in Sjögren's Syndrome: Predictors and Impact on Patient Outcome [abstract]. Arthritis Rheumatol. 2021; 73 (suppl 10).
4. Sundaram T, Misra D, Chatterjee R, Ahmed S, Agarwal V. Factors Predicting Mortality in an Indian Cohort of Systemic Sclerosis [abstract]. Arthritis Rheumatol. 2021; 73 (suppl 10).
5. Gupta L, Lilleker J, Agarwal V, Kardes S, Milchert M, Gheita T, Salim B, Velikova T, Distler O, Chinoy H, Aggarwal V, Aggarwal R. COVID-19 Vaccination in Autoimmune Disease (CoVAD) Study: Interim Analysis of Safety in Idiopathic Inflammatory Myopathies from a Large

- Multicentre Global Survey [abstract]. *Arthritis Rheumatol.* 2021; 73 (suppl 10).
- Naveen R, R Thakare D, Agarwal V, Aggarwal R, Gupta L. Validation of Two Simple Patient-centered Outcome Measures for Virtual Monitoring of Patients with Idiopathic Inflammatory Myositis [abstract]. *Arthritis Rheumatol.* 2021; 73 (suppl 10).
 - Mehta P, Singh P, Aggarwal A. Serum Galectin-9 and CXCL-10 but Not Their Urinary Levels Reflect Lupus Activity [abstract]. *Arthritis Rheumatol.* 2021; 73 (suppl 10).
 - Rajasekhar L, Bhavani D, Tota S, Vijayalekshmi V, Gupta R, Kavadiachanda C, Shobha V, Negi V, Aggarwal A. Quality of Life Assessment in an Indian Inception Cohort (INSPIRE) of SLE Using Lupus QoL Questionnaire [abstract]. *Arthritis Rheumatol.* 2021; 73 (suppl 10).
 - Weiss P, Brandon T, Aggarwal A, Burgos-Vargas R, Colbert R, Horneff G, Joos R, Laxer R, Minden K, Ravelli A, Ruperto N, Smith J, Stoll M, Tse S, Van den Bosch F, Lambert R, Biko D, Chauvin N, Francavilla M, Jaremko J, Herregods N, Kasapcopur O, YILDIZ M, Hendry A, Maksymowych W. Data-driven MRI Definitions for Active and Structural Sacroiliac Joint Lesions in Juvenile Spondyloarthritis Typical of Axial Disease [abstract]. *Arthritis Rheumatol.* 2021; 73 (suppl 10).
 - Individuals with reactive arthritis suffer from poor Health-related quality of life akin to Ankylosing spondylitis: comparative survey- based multigroup study- R. Kharbanda , K. Thomas , V. Agarwal , L. Gupta-APLAR 2021
 - High burden of tuberculosis in systemic lupus erythematosus: a retrospective study from a large Indian Cohort- R. Chatterjee , H. Muhammed , A. Jain , S. Pattanaik , N. Ravichandran, H. Kabeer , L. Gupta , D. Misra , V. Agarwal , A. Lawrence , R. Mishra , A. Aggarwal- APLAR 2021
 - Clinical outcomes of juvenile idiopathic arthritis and predictors of joint damage- Anu Balakrishnan- KCR 2021
 - Anti-synthetase syndrome masquerading as COVID-19- Rajat Kharbanda- KCR 2021
 - Acute renal failure as the initial presentation of Sjögren's syndrome- Upendra Rathore- KCR2021

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

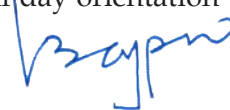
- First prize for best paper in Basic sciences was awarded to Dr Upendra Rathore, DM student for his paper "Tacrolimus with tadalafil is effective in suppressing Th17- IL17 pathway in Takayasu arteritis"
- Runner up prize for paper in Clinical and Therapeutic sciences to Dr Naveen R, adhoc faculty member for his paper " Predictors of long-term functional outcomes of Enthesitis Related Arthritis (ERA) Category of Juvenile Idiopathic Arthritis (JIA) in Adulthood: A Single Centre Experience from a tertiary care hospital

Members of international societies.

- Amita Aggarwal: International fellow of American college of Rheumatology

CMEs organized

5th National Conference on Primary Immunodeficiency Diseases was held at SGPGI in a virtual mode on March 6-7, 2021. The theme of the meeting was **Autoinflammation and Autoimmunity**. The meeting was attended by nearly 200 delegates from 8 countries including UK, Canada, USA, Sri Lanka, Nepal, Jordan, Italy and India. The meeting was inaugurated by Dr VM Katoch, Ex DG ICMR. The speakers included experts of USA, Canada, Italy, UK and India. A half day orientation course was also held for general pediatricians to increase awareness about PID.

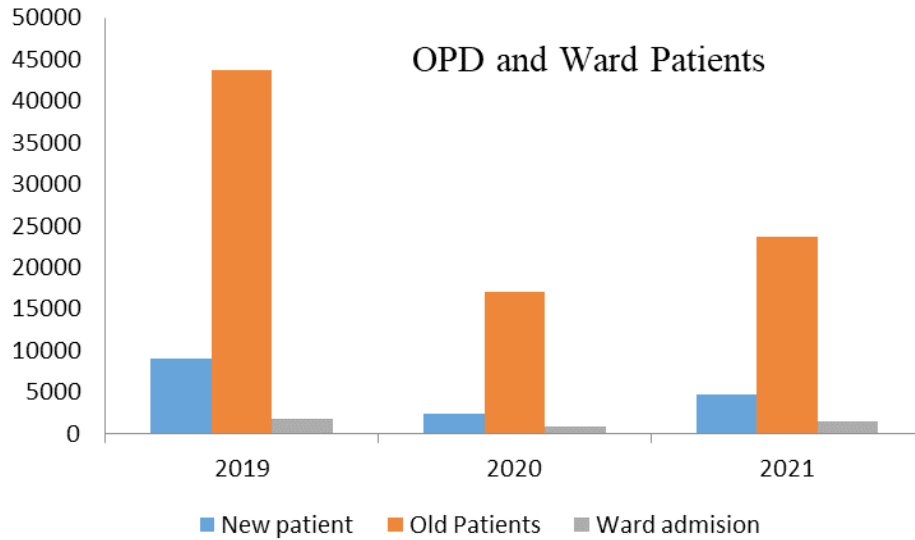


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Service

Patients seen (affected by COVID)

Year	New Patient	Old Patient	Ward Admission
2019	9036	43755	1813
2020	2349	17079	902
2021	4719	23732	1409



Investigations done

SN.	Name of Test	2019	2020	2021
1	RF	680	157	320
2	Anti Nuclear Antibody	9749	3059	7402
3	Anti Mitochondrial Antibodies	1069	326	1147
4	Anti Smooth Muscle Antibody	2082	646	1860
5	Anti-LKM Antibodies	1364	448	1505
6	Anti ds-DNA	2661	1097	2533
7	ANCA Screen	2687	1152	2357
8	IgG Anti Cardiolipin Ab	542	158	311
9	ENA Screen	2049	659	1627
10	Anti Parietal Cell Antibody	547	124	308
11	Anti- GBM Elisa	660	243	617
12	Anti-MPO (ANCA) - Elisa	149	85	164
13	Anti-PR3 (ANCA) - Elisa	147	85	165
14	IgM Anti Cardiolipin Ab	551	161	314
15	Anti-CCP Antibodies	595	169	456

16	RA Screening	3157	544	1749
17	Anti Tissue Transglutaminase Antibody	2721	649	2352
18	Anti Phospholipid Antibody Profile	1265	500	1132
19	Myositis Specific Auto Antibodies	202	63	115
20	Anti Aquaporin-4-IIFT	11	13	20
21	ENA Systemic Sclerosis	15	15	45
22	PLA2R Elisa Test	0	0	68
23	Myositis SA (TIF-1y and MDA-5)	0	0	17
24	Neuromyelitis Optica Screening Test	0	0	6
25	C Reactive Protein	10224	2864	6086
26	C4	3932	1460	3213
27	Alpha-1 Antitrypsin	54	10	127
28	IgG	1851	722	2094
29	IgA	1142	340	854
30	IgM	743	367	789
31	C3	3964	1488	3272
32	Cryoglobulin	28	11	39
33	Serum Ferritin (Nephelometric)	1871	674	1410
34	Serum Ceruloplasmin	696	174	644
35	Serum IgE	454	189	779
36	Serum IgG4	0	0	41
37	Lymphocyte subtyping (CD4/CD8 ratio)	0	0	1
38	Absolute CD4 Count	10	0	3
39	Lymphocyte subset analysis	0	0	2
40	B Cells Counts	0	0	4
41	ESR	8683	1488	1134

Training

- 4 DM students completed their DM and 12 are on the rolls. 3 PhD students are currently enrolled. 2 DM Student, from CMC, Vellore from 11-31 Dec, 2021. And one student from Indraprastha Apollo Hospital, New Delhi September 15, 2021-14 Oct, 2021 trained here

Research completed during the year


- Name of the sponsoring agency: SGPGIMS [Amita Aggarwal]

Title of the Project: **Outcome in Adulthood of children with enthesitis related arthritis (ERA) category of juvenile idiopathic arthritis (JIA) and its predictors.**

Result: Almost 90% of adults with ERA had active disease even after 8 years of disease. Poor outcomes were seen in three-fourths. Hip involvement, presence of HLA B27, and axial involvement were the predictors of poor disease outcome.

- Name of the sponsoring agency: SGPGIMS [Vikas Agarwal]

Title of the Project: **To evaluate the role of CXCR2 Ligands (IL-8 and Gro-a) on A1K1 and A1K5 Imbalance in chondrocytes Derived from OA cartilage**



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Research in Progress

1. **ICMR:** Evaluation of peripheral blood T and B cell responses to M tuberculosis membrane and the associated antigen alpha crystallin as progression biomarkers for tuberculosis.
2. **WHO/NIV** Study on Polio and Non-Polio enterovirus infections in children with immunodeficiency at multiple medical institutes across India.
3. **JSS Medical Res India Pv. Ltd:** 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.
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.
5. **ICMR:** Disease outcome in adulthood of children with enthesitis related arthritis (ERA) category of Juvenile Idiopathic arthritis and its predictors: a cohort study
6. **DBT:** Multi-institutional network program on systemic lupus erythematosus understanding the diversity of SLE.
7. **FPID, USA:** FPID_SGPGI primary immunodeficiency centre.
8. **SGPGIMS:** Evaluations of TGF- β Induced Canonical and Non Canonical Fibrotic Pathways in Fibroblasts Derived from stricture esophagu.
9. **SGPGIMS:** Determination of Myositis specific and Myositis Associated antibody profiles of Indian Myositis patients using the Immunoprecipitation assay.
10. **SGPGIMS:** Characterization of circulating microparticles in ANCA vasculitis and their role in inducing endothelial injury and glomerulonephritis

Publications

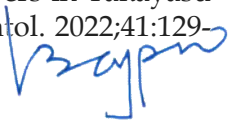
Indexed Publications

1. Aggarwal A, Aggarwal R. Covid-19 Vaccines: Several technologies at work. *Natl Med J India.* 2021;34:1-3.
2. Bagri NK, Gupta L, Sen ES, Ramanan AV. Macrophage Activation Syndrome in Children: Diagnosis and Management. *Indian Pediatr.* 2021;58:1155-61.
3. Bhatia A, Gaur PS, Zimba O, Chatterjee T, Nikiphorou E, Gupta L. The untapped potential of Instagram to facilitate rheumatology academia. *Clin Rheumatol.* 2022;41:861-7.
4. Bhatia A, Kc M, Gupta L. Increased risk of mental health disorders in patients with RA during the COVID-19 pandemic: a possible surge and solutions. *Rheumatol Int.* 2021;41:843-50.
5. Biswas M, Saba L, Omerzu T, Johri AM, Khanna NN, Viskovic K, Mavrogeni S, Laird JR, Pareek G, Miner M, Balestrieri A, Sfrikakis PP, Protogerou A, Misra DP, Agarwal V, Kitis GD, Kolluri R, Sharma A, Viswanathan V, Ruzsa Z, Nicolaidis A, Suri JS. A Review on Joint Carotid Intima-Media Thickness and Plaque Area Measurement in Ultrasound for Cardiovascular/Stroke Risk Monitoring: Artificial Intelligence Framework. *J Digit Imaging.* 2021;34:581-604.
6. Chalhoub NE, Wenderfer SE, Levy DM, Rouster-Stevens K, Aggarwal A, Savani SI, Ruth NM, Arkachaisri T, Qiu T, Merritt A, Onel K, Goilav B, Khubchandani RP, Deng J, Fonseca AR, Ardoin SP, Ciurtin C, Kasapcopur O, Jelusic M, Huber AM, Ozen S, Klein-Gitelman MS, Appenzeller S, Cavalcanti A, Fotis L, Sern Chin L, Silva RM, Ramirez-Miramontes J, Rosenwasser NL, Saad-Magalhaes C, Schonenberg- Meinema D, Scott C, Silva CA, Enciso S, Terreri MT, Torres-Jimenez AR, Trachana M, Al-Mayouf SM, Devarajan P, Huang B, Brunner HI; Childhood Arthritis, Rheumatology Research Alliance Lupus Nephritis Work Group, the

- Pediatric Rheumatology European Society Lupus Working Party. International Consensus For The Dosing Of Corticosteroids In Childhood-Onset Systemic Lupus Erythematosus With Proliferative Lupus Nephritis. *Arthritis Rheumatol.* 2021 Jul 19. doi: 10.1002/art.41930. Epub ahead of print. PMID: 34279063. Naveen R, Thakare DR, Agarwal V, Aggarwal R, Gupta L. Validation of two simple patient-centered outcome measures for virtual monitoring of patients with idiopathic inflammatory myositis. *Clin Rheumatol.* 2021;17:1-8.
7. Chatterjee R, Mehta P, Agarwal V, Gupta L. High burden of infections in Indian patients with Idiopathic Inflammatory Myopathy: validation of observations from the MyoCite dataset. *Rheumatology (Oxford).* 2021;60:4315-26.
 8. Coskun Benlidayi I, Gupta L. The pathophysiological effects of exercise in the management of idiopathic inflammatory myopathies: A scoping review. *Int J Rheum Dis.* 2021;24:896-903.
 9. Ganatra K, Gasparyan AY, Gupta L. Modern Health Journalism and the Impact of Social Media. *J Korean Med Sci.* 2021;36:e162.
 10. Gangadharan H, Singh A, Majumder S, Aggarwal A. Adenosine Deaminase Gene Polymorphism and Baseline Serum Level of Adenosine Deaminase as a Biomarker of Response to Methotrexate in Rheumatoid Arthritis. *J Clin Rheumatol.* 2021;27:e609-11.
 11. Gangadharan H, Singh A, Singh K, Rahman K, Aggarwal A. A Rare Cause of Double Negative $\alpha\beta$ T Cell Lymphocytosis. *Indian J Hematol Blood Transfus.* 2021;37:511-3.
 12. Gangadharan H, Singh K, Phadke S, Aggarwal A. Clinical Sequencing Solves a Diagnostic Dilemma by Identifying a Novel Pathogenic Variant in USB1 Gene Causing Poikiloderma with Neutropenia. *Indian J Pediatr.* 2021;88:270-1.
 13. Gangadharan H, Singh K, Phadke S, Aggarwal A. Clinical Sequencing Solves a Diagnostic Dilemma by Identifying a Novel Pathogenic Variant in USB1 Gene Causing Poikiloderma with Neutropenia. *Indian J Pediatr.* 2021;88:270-1.
 14. Ganguly S, Chatterjee R, Gupta L. A Rare Case of Fibrosing Ossificans Progressiva. *J Clin Rheumatol.* 2021;27:e283-4.
 15. Ganguly S, Lawrence A, Gupta L. Prevalent vertebral fractures incur high risk of future fractures in inflammatory myositis. *Clin Rheumatol.* 2021;40:1431-6.
 16. Gaur PS, Gupta L. Social Media for Scholarly Communication in Central Asia and Its Neighbouring Countries. *J Korean Med Sci.* 2021;36:e36.
 17. Gaur PS, Saha S, Atukorale H, Lim I, Kuang CY, Wong P, Harifi G, Salim B, Danda D, Haq AU, Gupta L. Online academic community in the Asia-Pacific countries: The paragon of a metamorphic world. *Int J Rheum Dis.* 2021;24:1229-34.
 18. Goyal M, Patil P, Pathak H, Santhanam S, Goel A, Sharma V, Pandey A, Gupta N, Jain R, Akerkar S, Das P, Dudam R, Mendiratta N, Pandey BD, Cb M, Singh BK, Kumar S, Nolkha N, Jain S, Jain S, Sharma A, Misra DP. Impact of COVID-19 pandemic on patients with SLE: results of a large multicentric survey from India. *Ann Rheum Dis.* 2021;80:e71.
 19. Gupta L, Agarwal V, Misra R. Changing the Way Scientific Meetings Are Conducted-Results From a Survey Conducted Among Attendees of a Technology-Modeled Rheumatology Meeting. *J Clin Rheumatol.* 2021 Dec 1;27(8S):S865-7.
 20. Gupta L, Aggarwal R, Naveen R, Lawrence A, Zanwar A, Misra DP, Agarwal V, Misra R, Aggarwal A. High Prevalence of Active Tuberculosis in Adults and Children with Idiopathic Inflammatory Myositis as Compared with Systemic Lupus Erythematosus in a Tuberculosis Endemic Country: Retrospective Data Review from a Tertiary Care Centre in India. *Med (Berr)* *Rheumatol.* 2021;32:134-42.

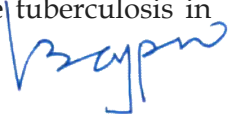
21. Gupta L, Ahmed S, Singh B, Prakash S, Phadke S, Aggarwal A. Novel NLRP12 variant presenting with familial cold autoimmunity syndrome phenotype. *Ann Rheum Dis.* 2021;80:e117.
22. Gupta L, Bhatt AS, Mallya V, Rana D, Khurana N, Singh I. Oro-facial tuberculosis - Is it still an enigmatic entity? *Indian J PatholMicrobiol.* 2021;64:250-3.
23. Gupta L, Edavalath S, Choudhary N, Aggarwal A. Hypergammaglobulinemic Purpura as the First Presentation of Juvenile Onset Sjögren Syndrome-Case-Based Review of Literature. *J Clin Rheumatol.* 2021;27:S357-61.
24. Gupta L, Gaur K, Sakhuja P, Sharma BC, Saran RK, Batra VV. Duodenal strongyloidiasis - Our 15-year histopathological experience at a tertiary gastrointestinal centre. *Trop Doct.* 2021;51:219-22.
25. Gupta L, Guleria A, Rawat A, Kumar D, Aggarwal A, NMR-based clinical metabolomics revealed distinctive serum metabolic profiles in patients with spondyloarthritis. *Magn Reson Chem.* 2021;59:85-98.
26. Gupta L, Khan H, Sinha M, Misra DP, Kharbanda R, Chatterjee T, Nune A, Agarwal V. Rheumatology education in India: a survey-based cross sectional study. *Rheumatol Int.* 2021;41:1773-83.
27. Gupta L, Kharbanda R, Agarwal V, Misra DP, Agarwal V. Patient Perspectives on the Effect of the SARS-CoV-2 Pandemic on Patients With Systemic Sclerosis: An International Patient Survey. *J Clin Rheumatol.* 2021;27:31-3.
28. Gupta L, Lilleker JB, Agarwal V, Chinoy H, Aggarwal R. COVID-19 and myositis - unique challenges for patients. *Rheumatology (Oxford).* 2021;60:907-10.
29. Gupta L, Misra DP, Agarwal V, Balan S, Agarwal V. Management of rheumatic diseases in the time of covid-19 pandemic: perspectives of rheumatology practitioners from India. *Ann Rheum Dis.* 2021;80:e1.
30. Gupta L, Naveen R, Ahmed S, Zanzwar A, Misra DP, Lawrence A, Agarwal V, Misra R, Aggarwal A. Juvenile Reactive Arthritis and other Spondyloarthritides of Childhood: A 28-year Experience from India. *Mediterr J Rheumatol*2021;32:338-44.
31. Gupta L, Naveen R, Gaur P, Agarwal V, Aggarwal R. Myositis-specific and myositis-associated autoantibodies in a large Indian cohort of inflammatory myositis. *Semin Arthritis Rheum.* 2021;51:113-20.
32. Gupta L, Tariq J, Yessirkepov M, Zimba O, Misra DP, Agarwal V, Gasparyan AY. Plagiarism in Non-Anglophone Countries: a Cross-sectional Survey of Researchers and Journal Editors. *J Korean Med Sci.* 2021;36:e247.
33. Gupta R, Joshi M, Gupta L. An Integrated Guide for Designing Video Abstracts Using Freeware and Their Emerging Role in Academic Research Advancement. *J Korean Med Sci.* 2021;36:e66.
34. Gupta R, Yadav A, Aggarwal A. Urinary soluble CD163 is a good biomarker for renal disease activity in lupus nephritis. *Clin Rheumatol.* 2021;40:941-8.
35. Hazarika K, Gupta L, Dixit J, Sahoo RR, Misra DP, Wakhlu A. Aortitis in systemic lupus erythematosus: A report of two cases and review of literature. *Indian J Rheumatol*2021;16:99-104.
36. Hazarika K, Sahoo RR, Mohindra N, Wakhlu A, Manoj M, Bafna P, Garg R, Misra DP, Agarwal V, Wakhlu A. Clinical, radiologic and serologic profile of patients with interstitial pneumonia with autoimmune features: a cross-sectional study. *Rheumatol Int.* 2021 May 27:1-11.
37. Jain S, Dhir V, Aggarwal A, Gupta R, Leishangthem B, Naidu S, Khullar A, Maurya S, Dhawan V, Sharma SK, Sharma A, Jain S. Comparison of two dose escalation strategies of methotrexate in active rheumatoid arthritis: a multicentre, parallel group, randomised controlled trial. *Ann Rheum Dis.* 2021;80:1376-84.

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

None

c. Chapter(s) in Book(s)

1. Aggarwal A. Biologics in pediatric connective tissue diseases. In *Textbook of Biologics for Rheumatological Disorders*. Ed Duggal L, Jain N. Published by Oxford Univ Press. 2021.
2. Gupta R, Aggarwal A. Systemic lupus erythematosus. in *Skin in Rheumatological disorders*. Ed Yadav S, Gupta S, Kumar U. Jaypee brothers. 2021 pp55-67.
3. Kharbanda R, Agarwal V, Misra DP. Systemic Sclerosis. In Handa R, Sharma A (Ed). *Urgencies and Emergencies in Rheumatology 2021 2nd ed.* Evangel Publishing House. Pp 29-41
4. Mehta PK, Misra DP, Agarwal V. Pathogenesis of Ankylosing Spondylitis. In Handa R, Sharma A (Ed). *Rheumatology Clinics-Spondyloarthritides.* 2021 ed Evangel Publishing House. Pp 155-161
5. Misra DP, Patro P, Agarwal V. Systemic Reviews: Methodology and Relevance for the Internist. In Sundar S (Ed.) *Medicine Update 2022 ed.* Evangel Publishing House.
6. Phatak S, Aggarwal A. Emergencies in Juvenile idiopathic arthritis. In *Rheumatology clinics: Urgencies and emergencies in Rheumatology.* Ed Handa R, Sharma A. 2nd edition Published by Evangel 2021pp117-121
7. Phatak S, Aggarwal A. Immunodiagnostics in rheumatological disorders in Skin in *Rheumatological disorders.* Ed Yadav S, Gupta S, Kumar U. Jaypee brothers. 2021 pp20-27.

d. Books None

Visiting Professors

None as due to COVID 19 no travel was happening



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Departmental highlights

1. The department has continued full teaching despite the pandemic.
2. The departments residents and faculty have contributed to care of COVID-ICU patients
3. Projects on COVID related issues were done by faculty, which led to multiple publications.

New Initiatives

None

Patents

None



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DEPARTMENT OF CRITICAL CARE MEDICINE

STAFF

Name of Faculty Members:

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

Activities

Awards and Honours

Mohan Gurjar

- Presidential Citation Award at 27th Annual conference of the Indian Society of Critical Care Medicine (ISCCM), 26th - 28th Feb 2021

Presiding over National level CME of national or international conference

Mohan Gurjar

- Course coordinator for Workshop on Mechanical Ventilation at eAPICON 2021. 4th March, 2021.

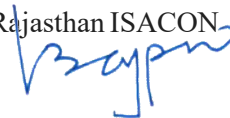
Invited lectures

Banani Poddar

- Invited as expert for 'Procedure of the month' of the Indian Academy of Pediatrics Intensive Care Chapter on the topic 'Infection control practices in the PICU' on 20 September 2021.
- Invited lecture on 'Rationale of antibiotic prescription' by ICCCM for STEP program on March 24, 2021.

Mohan Gurjar

- Intravenous fluids in ICU: Which one and when? National Board of Examination in Medical Sciences (NBEMS), New Delhi, 18th Dec 2021
- Peri-operative management of septic patient undergoing laparotomy. 9th SGPGI Postgraduate Anaesthesiology Refresher Course, SGPGIMS, 10th April, 2021.
- Challenges in communication in critically ill patients. At Medical Ethics Seminars on Communication in Healthcare: Skills and Challenges, SGPGIMS, 6th March, 2021. Organized by Bioethics Cell, SGPGIMS, Lucknow.
- Tailoring antifungal therapy. At CRITICARE 2021, Virtual Conference, 27th Annual Conference of Indian Society of Critical Care Medicine (ISCCM), 26-28th February, 2021.
- Intra-operative Management of Sepsis and Septic Shock: Bringing the ICU to the OR. Rajasthan ISACON 2020. 6th February, 2021. Organized by AIIMS, Jodhpur.



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Receipt of prizes or medals by staff

- Mrs. Anju Kapoor, PA to HOD, received “award of excellence” on the Republic Day celebrations held on 26.01.21

Academic visit to other institutions- 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-

1. Department organised a workshop on ‘Transthoracic Echocardiography’ on 9th October 2021.

Service

Patient Care Services

The Department runs only IPD services

	2019	2020	2021
Admissions	305	229	289
Tests and procedures			
Central venous catheterisation	485	450	480
Intra-arterial catheterisation	290	220	300
Pulmonary artery catheterisation	02	04	02
Endotracheal intubations	100	150	50
Percutaneous tracheostomy	110	120	90
Renal replacement therapy	490	500	540
Bronchoscopy	110	130	180
Chest drain placement	45	50	20
Ascitic fluid drainage	25	15	22
Outreach services rendered in other wards			
Organ failure assessment and management	320	350	360
Follow-up of critically ill patient	230	220	200
Cardiopulmonary resuscitation	45	40	50
Central venous catheterisation	200	180	200
Endotracheal intubations (other than CPR)	40	25	45

Training

Residents/Students

DM- 09



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PDCC- 12

SR(HS)- 02

Passed DM candidates - 02

Passed PDCC candidates - 04

Research completed during the year (Non-funded)

1. A prospective observational study of intrahospital transport of critically ill patients (Prof Banani Poddar)
2. Arterial cannulation in critical care patients: a comparative study between ultrasound guidance and palpation technique (Prof. Afzal Azim)

Research in progress

1. Incidence and clinical implication of neck and upper limb deep vein thrombosis in a multidisciplinary ICU –A prospective observational study (Prof. Afzal Azim)
2. The predictive value of Brachial artery reactivity in predicting the mortality of patients with sepsis and septic shock in ICU – A Prospective Cohort Study (Prof. Afzal Azim)
3. Gastroesophageal reflux disease and its health-related quality of life among ICU survivors (Prof. Mohan Gurjar)
4. Comparison of the effect of chest percussion and expiratory rib cage compression on blood gases and static lung compliance in mechanically ventilated adult patients with acute respiratory distress syndrome: A randomized crossover study (Prof. Mohan Gurjar)

Research Projects

Intramural

Incidence and etiology of diarrhoea in critically ill adult patients: An observational study (PI- Prof Banani Poddar, Funding agency- SGPGIMS, Amount - ₹ 2.95 Lac, Sanction:2021, Duration: October 2021 to March 2023, IEC Code: 2021-278-IMP-EXP-43)

Extramural- Nil

Publications

Indexed Journal Publications

1. Mehta A, Singh R, Mani VE, Banani Poddar. Japanese B Encephalitis. Indian J Crit Care Med 2021;25 (Suppl 2): S171-S174.
2. Samanta S, Patnaik R, Azim A, Gurjar M, Baronia AK, Poddar B, Singh RK, Neyaz Z. Incorporating Lung Ultrasound in Clinical Pulmonary Infection Score as an Added Tool for Diagnosing Ventilator-associated Pneumonia: A Prospective Observational Study from a Tertiary Care Center. Indian J Crit Care Med. 2021 Mar;25(3):284-291.
3. Poddar B. Critically Ill Pediatric Oncology Patients: A Difficult-to-treat Population. Indian J Crit Care Med. 2021 Oct;25(10):1091-1092.
4. Patnaik R, Misra R, Azim A, Harsvardhan R, Gurjar M, Baronia AK, Poddar B. Evaluation of ventilator-associated events in critically ill patients with invasive mechanical ventilation: A prospective cohort study at a resource-limited setting in Northern India. J Crit Care. 2021 Aug;64:29-35.

5. Kapoor A, Baronia AK, Azim A, Agarwal G, Prasad N, Mishra R, Saraswat VA. Breathability and Safety Testing of Personal Protective Equipment: "Human-comfort" Factor Remains Undefined. *Indian J Crit Care Med.* 2021 Jan;25(1):12-15.
6. Pandey S, Adnan Siddiqui M, Azim A, Trigun SK, Sinha N. Serum metabolic profiles of septic shock patients based upon co-morbidities and other underlying conditions *Mol Omics.* 2021 Apr 1;17(2):260-276.
7. Saran S, Gurjar M, Azim A, Maurya I. Structural Risk Factors for Hospital-Acquired Infections in Intensive Care Unit. *HERD.* 2021;14(2):328-336.
8. Saran S, Dube M, Azim A. Less Costlier and Emergency Options for Intubation during Coronavirus Disease Times. *Indian J Crit Care Med.* 2021;25(12):1462-1463.
9. Azim A. Presepsin: A Promising Biomarker for Sepsis. *Indian J Crit Care Med.* 2021;25(2):117-118.
10. Ahmed A, Azim A. Peri-Intubation Need for RRT; Revised Intubation Bundle for COVID 19 ARDS. *EC Emergency Medicine and Critical Care* 5.4 (2021)
11. Barasker S, Gautam S, Agarwal A, Azim A. Serratus Anterior Plane Block Facilitated Weaning from Mechanical Ventilator in a Case of Thoracic Trauma. *Turk J Anaesthesiol Reanim.* 2021;49(3):267-268.
12. Zia H, Singh R, Seth M, Ahmed A, Azim A. Engineering Solutions for Preventing Airborne Transmission in Hospitals with Resource Limitation and Demand Surge. *Indian J Crit Care Med.* 2021;25(4):453-460.
13. Nasa P, Chaudhry D, Govil D, Daga MK, Jain R, Chhallani AA, Krishna A, Jagiasi BG, Juneja D, Barthakur HS, Jha H, Gurjar M, Rangappa P, Aladakatti R, Mishra RC, Shetty RM, Yadav R, Garg S, Nandakumar SM, Samavedam S, Ray S, Hadda V, Javeri Y, Munjal M. Expert Consensus Statements on the Use of Corticosteroids in Non-severe COVID-19. *Indian J Crit Care Med.* 2021 Nov;25(11):1280-1285. doi: 10.5005/jp-journals-10071-23923. PMID: 34866826
14. Wahab A, Patnaik R, Gurjar M. Use of direct oral anticoagulants in ICU patients. Part II - Clinical evidence. *Anaesthesiol Intensive Ther.* 2021;53(5):440-449. doi: 10.5114/ait.2021.110608. PMID: 34816706
15. Wahab A, Patnaik R, Gurjar M. Use of direct oral anticoagulants in ICU patients. Part I - Applied pharmacology. *Anaesthesiol Intensive Ther.* 2021;53(5):429-439. doi: 10.5114/ait.2021.110607. PMID: 34816705
16. Liu K, Nakamura K, Katsukawa H, Nydahl P, Ely EW, Kudchadkar SR, Takahashi K, Elhadi M, Gurjar M, Leong BK, Chung CR, Balachandran J, Inoue S, Lefor AK, Nishida O. Implementation of the ABCDEF Bundle for Critically Ill ICU Patients During the COVID-19 Pandemic: A Multi-National 1-Day Point Prevalence Study. *Front Med (Lausanne).* 2021 Oct 28;8:735860. doi: 10.3389/fmed.2021.735860. eCollection 2021. PMID: 34778298
17. Saran S, Gurjar M, Garg A. Identifying and implementing strategies to reduce the risk of self-contamination of healthcare workers caused by doffing of PPE during COVID-19 pandemic. *Disaster Med Public Health Prep.* 2020 Oct 22:1-12. doi: 10.1017/dmp.2020.396. Online ahead of print. PMID: 33087198
18. Jung C, Fjølner J, Bruno RR, Wernly B, Artigas A, Bollen Pinto B, Schefold JC, Wolff G, Kelm M, Beil M, Svirni S, van Heerden PV, Szczeklik W, Czuczwar M, Joannidis M, Oeyen S, Zafeiridis T, Andersen FH, Moreno R, Leaver S, Boumendil A, De Lange DW, Guidet B, Flaatten H; , COVIP Study Group (Gurjar M). Differences in mortality in critically ill elderly patients during the second COVID-19 surge in Europe. *Crit Care.* 2021 Sep 23;25(1):344. doi: 10.1186/s13054-021-03739-7. PMID: 34556171

19. Bruno RR, Wernly B, Flaatten H, Fjølner J, Artigas A, Bollen Pinto B, Schefold JC, Binnebössel S, Baldia PH, Kelm M, Beil M, Sigal S, van Heerden PV, Szczeklik W, Elhadi M, Joannidis M, Oeyen S, Zafeiridis T, Wollborn J, Arche Banzo MJ, Fuest K, Marsh B, Andersen FH, Moreno R, Leaver S, Boumendil A, De Lange DW, Guidet B, Jung C; COVIP Study Group (Gurjar M). Lactate is associated with mortality in very old intensive care patients suffering from COVID-19: results from an international observational study of 2860 patients. *Ann Intensive Care*. 2021 Aug 21;11(1):128. doi: 10.1186/s13613-021-00911-8. PMID: 34417919
20. Vogelaers D, Blot S, Van den Berge A, Montravers P; Abdominal Sepsis Study ('AbSeS') Group (Gurjar M) on behalf of the Trials Group of the European Society of Intensive Care Medicine. Antimicrobial Lessons From a Large Observational Cohort on Intra-abdominal Infections in Intensive Care Units. *Drugs*. 2021 Jun;81(9):1065-1078. doi: 10.1007/s40265-021-01534-w. Epub 2021 May 26. PMID: 34037963
21. Pham T, Pesenti A, Bellani G, Rubenfeld G, Fan E, Bugedo G, Lorente JA, Fernandes ADV, Van Haren F, Bruhn A, Rios F, Esteban A, Gattinoni L, Larsson A, McAuley DF, Ranieri M, Thompson BT, Wrigge H, Brochard LJ, Laffey JG; LUNG SAFE Investigators (Gurjar M) and the European Society of Intensive Care Medicine Trials Group. Outcome of acute hypoxaemic respiratory failure: insights from the LUNG SAFE Study. *Eur Respir J*. 2021 Jun 10;57(6):2003317. doi: 10.1183/13993003.03317-2020. Print 2021 Jun. PMID: 33334944
22. Berger MM, Appelberg O, Reintam-Blaser A, Ichai C, Joannes-Boyau O, Casaer M, Schaller SJ, Gunst J, Starkopf J; ESICM-MEN section (Gurjar M). Prevalence of hypophosphatemia in the ICU - Results of an international one-day point prevalence survey. *Clin Nutr*. 2021 May;40(5):3615-3621. doi: 10.1016/j.clnu.2020.12.017. Epub 2020 Dec 29. PMID: 33454128
23. Jung C, Flaatten H, Fjølner J, Bruno RR, Wernly B, Artigas A, Bollen Pinto B, Schefold JC, Wolff G, Kelm M, Beil M, Sviri S, van Heerden PV, Szczeklik W, Czuczwar M, Elhadi M, Joannidis M, Oeyen S, Zafeiridis T, Marsh B, Andersen FH, Moreno R, Cecconi M, Leaver S, Boumendil A, De Lange DW, Guidet B; COVIP study group (Gurjar M). The impact of frailty on survival in elderly intensive care patients with COVID-19: the COVIP study. *Crit Care*. 2021 Apr 19;25(1):149. doi: 10.1186/s13054-021-03551-3. PMID: 33874987
24. Madotto F, McNicholas B, Rezoagli E, Pham T, Laffey JG, Bellani G; LUNG SAFE Investigators (Gurjar M); ESICM Trials Group. Death in hospital following ICU discharge: insights from the LUNG SAFE study. *Crit Care*. 2021 Apr 13;25(1):144. doi: 10.1186/s13054-021-03465-0. PMID: 33849625
25. Burns KEA, Rizvi L, Cook DJ, Lebovic G, Dodek P, Villar J, Slutsky AS, Jones A, Kapadia FN, Gattas DJ, Epstein SK, Pelosi P, Kefala K, Meade MO; Canadian Critical Care Trials Group and Collaborators (Gurjar M). Ventilator Weaning and Discontinuation Practices for Critically Ill Patients. *JAMA*. 2021 Mar 23;325(12):1173-1184. doi: 10.1001/jama.2021.2384. PMID: 33755077
26. Labeau, S.O., Afonso, E., Benbenishty, J. et al. on behalf of the DecubICUs Study Team & the European Society of Intensive Care Medicine (ESICM) Trials Group Collaborators (Gurjar M). Prevalence, associated factors and outcomes of pressure injuries in adult intensive care unit patients: the DecubICUs study. *Intensive Care Med*. 2021;47(2):160-169. doi: 10.1007/s00134-020-06234-9. Epub 2020 Oct 9. PMID: 33034686

Non-indexed Journal Publications: Nil

Visiting Professors: Nil

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.



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New initiatives

Department has started nursing educational activities every Friday to improve the quality of care. Once this program becomes successful; the department will extend nursing education to all ward nursing officers of SGPGIMS.

Patents- Nil

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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 (DOJ 15.12.2021)

Awards and Honours:

Prof. S K Agarwal

- IACTSCON 2021 (Virtual) 26-28 Feb 2020;Chaired a session on Valve surgery.
- Learn MICS CABG with experts: Tips and tricks of MICS CABG. Chaired the session

Prof. Shantanu Pande

- Chairperson in session21-24 October 2021,21st Annual conference of PCSI 2021.
- Sternal dehiscence in current era in October 2021, 30-31st. 4th Annual conference of CVTSPWA
- Invited Speaker:September 2021, ISMICS Workshop along with the 6th Annual Conference of the Society of Minimally Invasive Cardiovascular And thoracic Surgeons of India (SMICTSI), "LIMA-RIMA harvesting through mini thoracotomy"

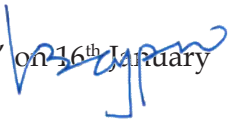
Service

Particulars	Year 2021	Year 2020	Year 2019
New registrations (OPD)	573	573	1175
Follow-up cases (OPD)	23016	6767	21337
Total admissions in Ward	492	492	821
Total Admissions & Transfers in ICU	573	382	944
Total Surgeries done	506	258	761

Training

Three MCh students were getting training during the year under review. Two of them appeared in the final MCh examination and both of them passed the examination. One of them is currently serving bond at PediatricSuperspeciality institute Noida and the other is serving bond at SGPGIMS, Lucknow. One student (2nd year MCh) left the course mid-way due to some personal and family problems and is currently working in a public hospital in Bihar as general surgeon.

The department also hosted the virtual meeting "Learn MICS CABG with Experts" on 16th January 2021.


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Research completed during the year: NA

Research in Progress

Funding Agency in bold: Department of Bio-Technology: Title of the Scheme (non bold):- 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 Journals)

1. Mammen A, Tewari P, Horo P, Pande S. Partial atrioventricular septal defect associated with Wolff-Parkinson-White syndrome. Perioperative dysrhythmias during the intracardiac repair. *Ann Card Anaesth* 2021;24:479-82
2. Gupta A, Mishra SC, Jaiswal S, Pande S. Intracardiac hydatid cyst located in right ventricular outflow tract: a rare site. *Indian Journal of Thoracic and Cardiovascular Surgery*. <http://dx.doi.org/10.1007/s12055-021-01165-6>
3. Mishra P, Singh RK, Nath A, Pande S, Agarwal A, Sanjeev OP, Gupta D, Singh P, Ghatak T, Hashim Z, Khare V, Khuba S, Rastogi A, Dhiman RK. A novel epidemiological scoring system for the prediction of mortality in COVID-19 patients. *Transactions of the Royal Society of Tropical Medicine and Hygiene*. April 2021
4. Pande S, Agarwal SK, Tewari P, Agrawal V, Srivastav N, Tripathi S, Soni N, Kumar S. Right ventricular dysfunction in rheumatic heart valve disease: A clinicopathological evaluation. *National Medical Journal of India*. 2021.0970-258-X
5. Soori R, Dixit A, Tewari P, Agarwal SK. Right ventricular outflow obstruction caused by cocoon duct occluder used for closure of ruptured sinus of valsalva aneurysm. *Annals of Cardiac Anaesthesia*. 2021.0971-9784 (Print) 0974-5181 (web)
6. Vimal S, Agarwal SK, Yadav S, Majumdar G, Mittal B, Sinha N, Ranjan R. Serum Metabolomics Profiling to Identify Novel Biomarkers for Cyanotic Heart Disease. *Biomedical and Pharmacology Journal*. 2021.2456-2610 (Online)
7. Vimal S, Ranjan R, Yadav S, Majumdar G, Mittal B, Sinha N, Agarwal SK. Differences in the serum metabolic profile to identify potential biomarkers for cyanotic versus acyanotic heart disease. *Perfusion*. 2021.0267-6591 (Print) 1445-111X (web)

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

1. Rahul R, Yadav P, Singh A, Verma P, Sabaretnam M, 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. *Indian J Endoc Surg Res* 2021;16(2);70-76

Chapter(s) in Book(s): NA

Books: NA

Visiting Professors: NA

Departmental Highlights

The Department of CVTS at SGPGIMS is the leading department in the state of Uttar Pradesh as well as in North India. It is now known for its work on minimal access cardiothoracic surgery, robotic cardiothoracic surgery and neonatal cardiac surgery for complex congenital heart diseases.

It continued to provide quality care to the patients including emergencies during the second wave of COVID. The department also helped in management of the epidemic of mucormycosis by surgical management of patients with lung involvement. The department helped the department of Cardiology in establishing transcatheter aortic valve replacement and to department of Radiodiagnosis in interventional management of complex vascular diseases including aortic aneurysms. Surgeons from all over the country come to learn the techniques of minimal access coronary artery bypass grafting and Robotic assisted CABG in the department. Department is also involved in research and has initiated a project funded by the DBT, Ministry of Science and Technology, Govt. of India for understanding pathophysiology of degeneration and its prevention of autologous pericardium so that it can be used to develop an autologous tissue valve for the patient that will not only be long lasting but will also help patients live a normal life without anticoagulation and its complications and restrictions. Although, take-up is not satisfactory (due to the stringent bond of the institute), in addition to the M.Ch. program, the department conducts 1-year Postdoctoral Fellowship (PDF) courses for Congenital as well as Minimally access surgery.

New Initiatives: Started robotic coronary artery bypass surgery and robotic thoracic surgeries (lung biopsy, lung resections, surgery for Hydatid cyst etc.

Patents: NA



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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 |

Awards and Recognitions

Dr Tanmoy Ghatak

- International scientist award on Engineering, Science and Medicine. VD Good professional association. 29th Aug 2021.
- Certificate of appreciation as frontline COVID warrior by Lucknow IMA. 11th September 2021.

Dr O P Sanjeev

- Fellowship of Academic College Emergency Experts in India (FACEE), December 2021.

Dr Alka Verma

- Fellowship of Academic College Emergency Experts in India (FACEE), December 2021.

Invited sessions and chairpersons /Lectures for conferences:

Prof R K Singh

- Delivered a Lecture on “What’s New in Sepsis” at Sepsis-Update-2021, on 13th September 21, at Department of Pulmonary & Critical Care Medicine, KGMU, Lucknow.

Dr Tanmoy Ghatak-Nil

Dr O P Sanjeev-Nil

Dr Alka Verma-Nil

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


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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
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 another Institute for Academic purpose.

Prof R K Singh

- External Examiner for MD-Emergency Medicine at AIIMS-Rishikesh, Nov-December 2021.



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Research projects

Projects completed (Funding Agency-SGPGI)

Prof R K Singh

- **Profile and outcome of patients admitted in emergency department during COVID pandemic: SGPGI Experience.**

The nationwide lockdown led to an increase and change in pattern of surgical emergencies, though the interventions required were less. Effective management entails appropriate preparedness.

- **Prevalence of Invasive Pulmonary Aspergillosis by Serological Lateral Flow Assay in Patients with COVID-19: A Pilot Study.**

The nationwide lockdown led to an increase and change in pattern of surgical emergencies, though the interventions required were less. Effective management entails appropriate preparedness. The overall prevalence and mortality of CAPA in our homogenous cohort of 1161 patients were 6.4% and 47.3%, respectively. The mortality of CAPA was higher than that of non-CAPA patients. Diabetes, persistent fever, haemoptysis, and lung lesions of cavitation, consolidation, and nodules were associated with development of CAPA by multivariable analysis.

Dr O P Sanjeev

- **Prevalence of Invasive Pulmonary Aspergillosis by Serological Lateral Flow Assay in Patients with COVID-19: A Pilot Study.**

The nationwide lockdown led to an increase and change in pattern of surgical emergencies, though the interventions required were less. Effective management entails appropriate preparedness. The overall prevalence and mortality of CAPA in our homogenous cohort of 1161 patients were 6.4% and 47.3%, respectively. The mortality of CAPA was higher than that of non-CAPA patients. Diabetes, persistent fever, haemoptysis, and lung lesions of cavitation, consolidation, and nodules were associated with development of CAPA by multivariable analysis.

Dr Alka Verma

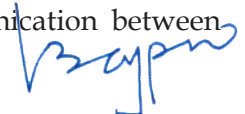
- **Profile and outcome of patients admitted in emergency department during COVID pandemic: SGPGI Experience.**

The nationwide lockdown led to an increase and change in pattern of surgical emergencies, though the interventions required were less. Effective management entails appropriate preparedness.

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.



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- Association of hyperglycaemia 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

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

Dr Alka Verma

- 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.
- Serological Immune Response Following ChAdOx1 nCoV-19 Vaccine (Covishield®) in Patients with Liver Cirrhosis.
- Association of hyperglycaemia at-admission & diabetes mellitus with 28 day mortality in patients admitted with moderate-severe SARS-CoV-2 infection: A retrospective study.

Publications

1. Mishra P; Singh RK; Nath A; Pande S; Agarwal A; Sanjeev OP; Gupta D; Singh P; Ghatak T; Hashim Z; et al. A novel epidemiological scoring system for the prediction of mortality in COVID-19 patients. *Trans. R Soc. Trop. Med. Hyg.* 2021;116(5): 409-416.
2. Samanta S, Patnaik R, Azim A, Gurjar M, Baronia AK, Poddar B, Singh RK, Neyaz Z. Incorporating Lung Ultrasound in Clinical Pulmonary Infection Score as an Added Tool for Diagnosing Ventilator-associated Pneumonia: A Prospective Observational Study from a Tertiary Care Center. *Indian J Crit Care Med.* 2021 Mar;25(3):284-291. doi: 10.5005/jp-journals-10071-23759. PMID: 33790508
3. Verma A, Sanjeev OP, Srivastava D, Yadav P, Singh RK. Predictors of Mortality among Non-Traumatic Non COVID Emergencies During Early COVID-19 Outbreak: An Observational Study on Clinical Profile and Outcome of Patients in North India *Journal of emergency medicine* Vol. 7 No. 3, July-Sep 2021.
4. Kulshrestha N, Ghatak T, Gupta P, Singh M, Agarwal J. Surveillance of health care workers hand to detect carriage of multidrug resistant *Staphylococcus* spp in a tertiary care center - an observational study. *Med J DY Patil Vidyapeeth.* 2021;14: 403-8. (Google Scholar, Hinari, CNKI)
5. Sanjeev OP, Mishra US, Singh A. Sign language can reduce communication interference in Emergency Department. *Am J Emerg Med.* 2021 Jul 21:S0735-6757(21)00592-1. doi: 10.1016/j.ajem.2021.07.026. Epub ahead of print. PMID: 34364708; PMCID: PMC8294705.
6. Sanjeev OP, Dubey PK, Tripathi M. Pre-anaesthesia ward for optimization of co-morbid illnesses of high-risk surgical patients: The time is now. *J Anaesthesiol Clin Pharmacol.* 2021 Apr-Jun;37(2):299-300. doi: 10.4103/joacp.JOACP_352_17. Epub 2021 Jul 15. PMID: 34349387; PMCID: PMC8289661.

7. Rahul, A Verma, P Yadav, VK Sharma, OP Sanjeev. Non-COVID surgical emergency during the nationwide lockdown due to corona pandemic: a critical appraisal. Indian Journal of Surgery 2021; 83 (1):268-272.
8. Verma A, Sanjeev OP Srivastava D, Yadav P, Singh RK. Predictors of Mortality among Non-Traumatic Non COVID Emergencies During Early COVID-19 Outbreak: An Observational Study on Clinical Profile and Outcome of Patients in North India Journal of emergency medicine Vol. 7 No. 3, July-Sep 2021
9. Verma A, Yadav P, Sharma VK, Sanjeev OP. Non-COVID surgical emergency during the nationwide lockdown due to corona pandemic: a critical appraisal. Indian Journal of Surgery. 2021 Feb;83:268-72.
10. Naveen R, Verma A, Raza HA, Chengappa KG, Naidu GS, Sharma S, Goel A, Misra DP, Sharma A, Gupta L, Agarwal V. Prescription practices, experiences, and perspectives on the usage of hydroxychloroquine among rheumatologists and other specialists. Indian Journal of Rheumatology. 2021 Jun 1;16(2):169-S178.

Chapters (s) in Book(s): Nil

Visiting Professors(s): Nil

Departmental Highlights

COVID-Related

1. The year 2021 encountered the 2nd and most disastrous COVID wave. I as HoD Emergency Medicine and Nodal-Officer-COVID-SGPGI, along with my faculty, were at the helm of affairs of the COVID management in SGPGI.
2. The Department of Emergency Medicine took the lead in managing COVID not only within SGPGI but also guided the 52 State Medical Colleges of UP in the science and art of managing the Global COVID Pandemic.
3. Active member of the UP-State-Advisory-Board, for COVID and Covid-Associated mucormycosis (CAM) set-up by the honourable CM, Shri Yogiadityanathji.
4. COVID-19 preparedness for the 2nd Wave, included designing & setting up of HCWs Wellness Committee & Departmental HCWs Wellness Teams, focused procurement of equipments and drugs like-Remdesivir, Baricitinib, Isovconazole, etc via HRF, installation of Liquid Oxygen at RCH-1.
5. Skilling of HCWs of 52 State Medical Colleges of UP, by imparting education, and training through ECHO, of COVID-Version-1.0 Teaching Modules (Series of 13-Didactic-Dedicated-COVID-Teaching-Slide Decks)
6. Regular Death Audit Committee (DAC) meetings to oversee the audit of the mortality of COVID patients admitted in RCH and several state medical colleges of UP and send them to the DGME-UP-Govt, on regular basis.
7. Regularly attended DGME & DGHS-UP Government meetings related with Management of COVID in UP during the 2nd wave.
8. Enhanced the Infection Prevention & Control (IPC) Practices in wake of the COVID pandemic and overall, for Hospital Infection Control.



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Non-COVID-Related

1. Enhanced elements of ED care in Red, Yellow and Green Zones, by incorporating elements of FAST-HUG-BIDS, VAP/CRBSI/CAUTI-Infection-Prevention Care Bundles and Needle-Safe-Practices, in our regular ED care.
2. Simultaneously designing, modifying, the ED-layout, and getting procured ED-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. In wake of COVID, structured the entire Emergency in compliance to IPC measures for COVID.
2. HCWs of ED were sensitized to COVID-Emergency-Microplan.
3. FAST-HUG-BIDS: Protocolized the implementation of these core-care-elements in daily care of admitted ED patients.
4. Quality Care Bundles: Strengthened the already implemented bundles of care for Ventilator Associated Pneumonia (VAP)/Catheter related blood stream infection (CRBSI)/Catheter associated urinary tract infection (CAUTI).
5. Infection Prevention and Control (IPC): Initiated the auditing of IPC in ED to gauge the adherence and compliance of IPC in Emergency.
6. Needle Safe Emergency: Strengthened the implementation, adherence, and compliance of Needle Safe Emergency initiative, by auditing the Peripheral Intra Venous Catheter (PIVC) and Central Intra Venous Catheter (CIVC) activities in ED.
7. VTE prevention in ED: Implemented the regular thromboprophylaxis (mechanical and pharmacological) for prevention of Venous-thrombo-embolism (VTE) in admitted patients in ED.



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DEPARTMENT OF ENDOCRINOLOGY

STAFF

Name of Faculty Members:

1. Eesh Bhatia, MBBS, MD, DNB (Endocrinology)	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

Awards & Honours:

Dr Rohit A Sinha, associate professor, was awarded the SGPGIMS 2nd Research Day Award (Dec 2021) for best paper (Basic Science-Assistant Professor category)

Invited Lectures by Faculty Members

Preeti Dabadghao

- Indian Society of Pediatric and Adolescent Endocrinology 2021 14-Nov 2021

Members of International Societies

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)
- International Society for Pediatric and adolescent Diabetes



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Rohit A. Sinha

- Endocrine Society (USA)
- European Society for Endocrinology (ESE)
- Endocrine and Metabolic Society of Singapore (EMSS)

Service

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

	2019	2020 (Covid year)	2021 (Covid year)
OPD- New patient attendance	3628	959	2139
OPD- Old patient attendance	34259	13144	31752
IPD admissions	2033	660	803
Endocrinology Lab Samples	110361	60878	106251
DEXA lab tests	1456	421	1022

Training

1. 12 students enrolled for DM Endocrinology, 2 students for PDCC Pediatric Endocrinology and 3 students for PhD
2. In 2021, 4 students were awarded DM, 1 was awarded PhD and 2 were awarded PDCC.

Research completed during 2021

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.

PI - Dr Rohit A Sinha

- Results - Here, we examined mammalian crinophagy and its modulation that regulate hormone secretion in a glucagon-producing mouse pancreatic α -cell line, alpha TC1 clone 9 (α TC9), and in vivo. Western blot, electron microscopy, and immunofluorescence analyses were performed to study crinophagy and glucagon secretion in α TC9 cells and C57BL/6 mice, in response to the mammalian target of rapamycin complex 1 (MTORC1) inhibitor rapamycin. In summary, we have identified a novel crinophagic mechanism of intracellular glucagon turnover in pancreatic α -cells regulated by MTORC1 signalling (Rajak et al., Molecular Metabolism, 2021).
- Science and Engineering Research Board (SERB) - Alternations in immune, inflammatory and endocrine responses in Indian patients with diabetes infected with SARS-CoV-2 and its clinical consequences

PI - Dr S K Sahoo

Results -

- Patients with diabetes are older, have a higher prevalence of cardiovascular risk factors, and more likely to develop severe disease.
- Patients with diabetes mellitus who develop COVID19 have higher levels of serum cytokines e.g., IL-6, and IL-8, and chemokines such as IP10 and MCP1. They also have higher levels of soluble markers of macrophage activation i.e., CD14, CD25 and CD163.

- The cohort with DM has higher levels of inflammatory and coagulation markers. In addition, cardiac biomarkers were higher in patients with DM compared to those without DM.
- The prevalence of viremia does not seem to be different between the groups with and without diabetes and thus may not be responsible for a more severe disease and worse outcome in patients with diabetes mellitus.
- Alternations in thyroid hormone levels in patients admitted with COVID19 were common. These may be secondary to acute illness or involvement of the pituitary gland by SARS CoV2.
- A substantial proportion of patients admitted at COVID have relatively inadequate cortisol reserve. There was a U-shaped relationship with serum cortisol and severity of disease.
- A transient adrenal insufficiency, central in origin was common in the survivors.
- Abnormalities in the thyroid hormone level were not common in the survivors of COVID19.
- In a small number of patients followed at 12-18 months, new-onset DM was seen in 14% of patients.

3) Endocrine Society of India (ESI): 24 Hours glucose profile in women with gestational

Diabetes

PI- Preeti Dabadghao

Results: Fasting, pre-breakfast, 2 hr post lunch, day time and lowest nocturnal glucose were significantly higher in the GDM group than controls. Glycemic variability indices like standard deviation of blood glucose, J index, and mean amplitude of glycemic excursions were also significantly higher in GDM patients. GDM patients spent more time above >140 mg/dl than controls.

Research in Progress

1. **Intramural Grant SGPGI:** 24 hours glucose profile and beta cell function in women with early gestational diabetes mellitus. PI: Prof Preeti Dabadghao
2. **UP Council of Science and Technology(UPCST):** Pathological classification and outcome of silent (Non-functioning) pituitary adenoma. PI: Prof Preeti Dabadghao
3. **DBT-SAHAJ:** To establish facility for micro-architectural and histomorphometric assessment of bone in osteoporosis and metabolic bone disease (MBD). PI: Prof

Sushil K. Gupta

- **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) PI: Dr. Rohit A. Sinha
- **ICMR** - Islet antibody negative type 1 diabetes (type 1B) in north Indians: clinical implications and pathogenesis.PI - Dr Eesh Bhatia
- **ICMR** - Potential Role of aldo-keto Reductase Family 1, member B10 (AKR1B10) as a diagnostic and therapeutic target in Nonalcoholic steatohepatitis (NASH). PI - Dr Rohit A Sinha
- **Endocrine Society of India (ESI)** - Prediction of relapse after antithyroid therapy in Graves' disease. PI - Dr Subhash Yadav
- **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
- **DST** - Childhood Diabetes - District outreach as a model for decentralized care and education through use of telemedicine.PI - Dr V Bhatia

Publications

1. Gupta P, Dabas A, Seth A, Bhatia V. Indian Academy of Pediatrics Revised (2021) Guidelines on Prevention and Treatment of Vitamin D Deficiency and Rickets. Indian Pediatrics 2021;S097475591600382.
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 2021 DOI: 10.1515/jpem-2021-0707
3. Vijayakumar M, Ajitha BK, George B, Bhatia V. Vitamin D status in children on anticonvulsant therapy. Indian Journal of Pediatrics 2021 DOI: 10.1007/s12098-021-03853-y
4. Sharma L, Sudhanshu S, Bhatia V, Dabadghao P. Prevalence and epidemiological profile of celiac disease in children with type 1 diabetes mellitus: experience from a tertiary care centre of India. Pediatr Diabetes DOI: 10.1111/pedi.13280
5. Vipin VP, Zaidi G, Watson K, G Colman P, Prakash S, Agrawal S, Bhatia V, Dabadghao P, Bhatia E. High prevalence of idiopathic (islet antibody-negative) type 1 diabetes among Indian children and adolescents. Pediatr Diabetes 2021 DOI: 10.1111/pedi.13066
6. Nayak S, Sarangi AN, Sahoo SK, Mangla P, Tripathy M, Rao S, Gupta S, Paliwal VK, Sudhanshu S, Ravi C, Joshi K, Bhatia V, Bhatia E. Neonatal Diabetes Mellitus: Novel Mutations. Indian J Pediatr 2021 DOI: 10.1007/s12098-020-03567-7
7. Rajak, S.; Xie, S.; Tewari, A.; Raza, S.; Wu, Y.; Bay, BH.; Yen, PM.; Sinha, RA. mTORC1 inhibition drives crinophagic degradation of glucagon. Molecular Metabolism 2021 DOI: 10.1016/j.molmet.2021.101286
8. Zhou, J.; Gauthier, K.; Ho, JP.; Lim, A.; Zhu, XG.; Han, CR.; Sinha, RA.; Cheng, S.Y.; Yen, PM. Thyroid hormone receptor- α regulates autophagy, mitochondrial biogenesis, and fatty acid utilization in skeletal muscle. Endocrinology 2021 DOI: 10.1210/endo/bqab112
9. Yadav, S.; Porwal, K.; Sinha, RA.; Chattopadhyay, N.; Gupta SK. Moderate/subclinical calcium deficiency attenuates trabecular mass, microarchitecture and bone growth in growing rats. Biochem Biophys Rep 2021 DOI: 10.1016/j.bbrep.2021.101033
10. Zhou, J.; Singh, B.K.; Ho, JP.; Lim, A.; Bruinstroop, E.; Ohba, K.; Sinha, R.A.; Yen, P.M. MED1 mediator subunit is a key regulator of hepatic autophagy and lipid metabolism. Autophagy 2021 DOI: 10.1080/15548627.2021.1899691
11. Rajak, S.; Iannucci, L.F.; Zhou, J.; Anjum, B.; George, N.; Singh, B.K.; Ghosh, S.; Yen, P. M.; Sinha, R.A. Loss of ULK1 attenuates cholesterogenic gene expression in mammalian hepatic cells. Front. Cell Dev. Biol. 2021 DOI: 10.3389/fcell.2020.523550

Visiting Professor None

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 3.4 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.



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DEPARTMENT OF ENDOCRINE SURGERY (& BREAST SURGERY)

STAFF

Name of Faculty Members:

1. S.K. Mishra, MS, DNB	Professor & Head (Superannuated on 30.06.2021)
2. Amit Agarwal, MS	Professor & Head (w.e.f. 1 st July, 2021)
3. Gaurav Agarwal, MS,DNB, PDC	Professor
4. Anjali Mishra, MS, PDC	Professor
5. Gyan Chand, MS	Professor
6. Sabaretnem M., MS, MCh	Additional Professor
7. Abhishek Krishna, MS, MCh	Assistant Professor (Bond) (Joined 13.08.2021)
8. Vikram S., MS, MCh	Assistant Professor (Bond) (Joined 13.08.2021)
9. KMM Vishvak, MS, MCh	Assistant Professor (Bond) (Joined 13.08.2021)

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 2021. 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.

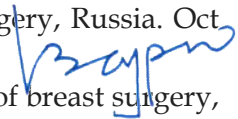
The department also took lead in the community outreach activities, and initiated the SGPGI Breast & Cervical Cancer Awareness and Early Detection Programme (SGPGI- BCCAEDP), which was launched on 17th September 2021 by the Hon Governor of UP Smt Anandiben Patel ji from Raj Bhavan. Under this programme, women in the age group of 35-70 years age residing the Tehsil Mohanlalganj will be imparted awareness regarding early diagnosis of breast and cervical cancer, and would be screened for these two cancers by public health workers.

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 2021) and in October- the breast cancer awareness month.

Conference Presentation / Invited Lectures

Prof. Gaurav Agarwal

- Breast conservation surgery after NACT. 1stBlack Sea congress of breast surgery, Russia. Oct 2021.
- Training in breast surgery in India, and role of the BSI. 1st Black Sea congress of breast surgery, Russia. Oct 2021.


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- Virtual Surgical week 2021. Aug-Sept 2021
- Panel Discussion. Hong Kong society of Breast Surgery annual congress. Sept 2021.
- Post NACT Breast Surgery. At 5th South East Asian Breast cancer symposium, Jakarta Indonesia. Aug 2021.
- Post-neoadjuvant chemotherapy management of axilla: Is conservatism a valid option? International Surgical Week of the Egyptian Society of Surgery. April 2021.
- Less is more. Evolution of frugal sentinel lymph node biopsy in breast cancer. Dr SR Naik awardees lecture. 2nd SGPGI Research Day. Dec 2021.
- Modified Benelli Oncoplastic Breast Surgery. Video lecture. ABSICON Nov. 2021.
- "Hyperparathyroidism- why it needs attention". J &K Masterclass on Thyroid & Parathyroid. Dec 2021.
- ASOMACON 2021.
- Heart of the matter.... Cardiac manifestations of endocrine surgical disorders. Dr KD Varma oration. IAESCON 2021, Oct 2021.
- Breast cancer- the Indian reality: Approach to axilla. 19th Annual Conference of WCI-TMH. Oct 2021.
- Triple assessment for a breast lump. Mumbai surgical association conference. Aug 2021.
- Starting an Oncoplastic breast surgery program. KGMU Breast update Aug 2021.
- Controversies and challenges in management of LABC. AMU Surgery Update Apr 2021.
- Optimal placement of breast incisions. At Jaipur Breast course. Feb 2021.

Dr. Anjali Mishra

- Lecture "Papillary thyroid carcinoma: case snippets" at 91st Annual Conference of Surgeons of India, December 17-19, 2021 on virtual platform (ASICON 2021)
- Lecture "Pediatric Adrenal Tumors" at 22nd Annual Conference of Indian Association of Endocrine Surgeons (IAESCON 2021), on virtual platform October 29-31, 2021

Dr. Gyan Chand

- Endoscopic Thyroid surgery (video Lecture) Three Day Workshop on Basic Minimal Access Surgery, Department of surgery, Alex Ekwueme Federal University, Teaching Hospital, Abakaliki (Aefutha), Nigeria on 3rd to 5th March 2021
- Endoscopic Thyroid Surgery Korean Society of Endoscopic and Laparoscopic Surgeon, April 2021 Korea
- Total Thyroidectomy "VIRTUAL P.G. MASTER CLASSES IN SURGERY" Under the aegis of UPASI, Dept. of Surgery, IMS, BHU, Varanasi, from 6th to 7th Feb 2021
- Aesthetic Thyroid Surgery- more than two decade experience SGPGI Clinical Grand Round on 13th Feb 2021
- Should Endoscopic Thyroid Surgery standard of Care ?? Annual Congress of American College of Surgeons- Indian Chapter, ACSCON 2021 organized by AIIMS, Patana, Patana Bihar, from 22nd to 25th March 2021
- e-Poster Session 2nd International Conference- Personalized Medicine, Recent Advances and Challenges, organized by Era medical university, Lucknow, from 22nd to 25th March 2021
- Retroperitoneoscopic Adrenalectomy Virtual, IAESCON 2021, 29th to 31st Oct 2021
- Current Status of Robotic Surgery in India Virtual INHA 2021, 12th November 2021

- Minimal Access Thyroid Surgery Hybrid, AMASICON 2021, India HabitateCenter, New Delhi from 26th to 28th Nov 2021
- Reducing Scar in Thyroid Surgery Virtual, ASICON 2021, 17th to 19th Dec 2021
- Image Guided Thyroid Surgery Hybrid, 17th International Conference of Telemedicine Society of India-TELEMEDICONE 2021 at SGPGIMS, Lucknow from 12th to 14th November 2021

Dr. Sabaretnam M.

- **Oral Presentation** “Analytic Study on Behavior of Trainees Towards Young Faculty during Endocrine Surgery Operative Procedures” presented in the 42nd ICS WORLD CONGRESS in conjunction with 17th APALMS-ISLSM Congress 2021 ICS Thailand.
- **Presented a Poster** –Colloid Leak a lightening effect at 23rd e-ECE European Association of Endocrinology 5th to 9th, May 2021.
- Organizing Committee member of IAESCON 2021
- Organizing Committee member of ASRICON 2021

Dr. Abhishek Krishna

- **Chairperson for 1st Jammu Thyroid and Parathyroid Surgery Masterclass (Virtual), 2021**
- Organizing committee member, Cyclothon- Walk or ride to raise awareness on breast cancer, October, 2021 at SGPGI, Lucknow, India

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



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- 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

Service

OPD	2021	2020	2019
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	7087	5960	16578
New Registration	1215	605	2765
Admission	1938	1744	3389
Surgery	1266	632	1656

Tests	2021	2020	2019
Serum Thyroglobulin	506	275	772
Anti ATG	506	275	772
Serum CEA	411	204	529
Serum CA 125	100	48	117
Serum Calcitonin	81	56	108
Serum CA 15-3	21	22	91
Urinary Iodine	--	--	--

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

Training:

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



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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) : Nil

Research Completed during the year

Prof. Gaurav Agarwal

- Role: PI and hospital lead. Unfunded “GlobalSurg-CovidSurg Week: Determining the optimal timing for surgery following SARS-CoV-2 infection” (International multi-centre cohort study). Status: Completed.
- SDHB Immunohistochemical staining as a method to assess SDH Mutations in Paragangliomas and Pheochromocytomas. (PI). 2014. Status: Completed. INR 0.5 Millions
- Prospective randomized controlled trial of use of in-house prepared low-cost radio-pharmaceutical and methylene blue dye versus commercially marketed dyes for sentinel node biopsy (SLNB) in patients with early stage invasive breast cancer. (PI). 2014. Status: Completed. INR 0.25 Millions

Prof. Anjali Mishra

- Incidence and Prognostic Significance of Androgen Receptors (AR) in Indian Triple Negative Breast Cancer- Anjali Mishra (Intramural)

Research in Progress:

Prof. Gaurav Agarwal

- Funded by SERB, DST GoI. Role: Principal Investigator. Grant Amount: INR 7.6 millions. Entitled “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 entitled “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 entitled “Targeting mitophagy in breast carcinogenesis through mitochondrial-mediated mechanisms”. Apr 2019 onwards. Status: Ongoing.
- Funded by Multicenter study. National Cancer Grid & TMH Mumbai. Role: Principal Investigator “A Phase III Randomized Controlled study of Inj. Proluton (Hydroxyprogesterone caproate) as single dose preoperative therapy in patients with high risk operable breast cancer”. Status: ongoing.
- 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 (Intramural)
- Prognostic and Predictive Value of Tumor Infiltrating Lymphocytes (TILs) and PD- L1 In Breast Cancer. (PI). 2019. Status: Ongoing (Intramural)
- 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 (Intramural)

- Correlation of RET genotype with clinical, pathological attributes and outcomes in patients with Medullary thyroid cancer. (PI). 2018. Status: Ongoing. INR 0.5 Millions (Intramural)

Dr. Anjali Mishra

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

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 compression of outcome 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



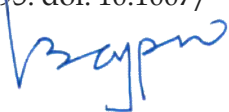
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Publications

Original Articles:

Indexed Publications:

1. 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.
2. 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.
3. COVID Surg Collaborative, Global Surg Collaborative, (Agarwal G). SARS-CoV-2 infection and venous thromboembolism after surgery: an international prospective cohort study. "Anaesthesia". 2022 Jan;77(1):28-39. doi: 10.1111/anae.15563. Epub 2021 Aug 24.
4. COVID Surg Collaborative, GlobalSurg Collaborative, (Agarwal G). Effects of pre-operative isolation on postoperative pulmonary complications after elective surgery: an international prospective cohort study. "Anaesthesia". 2021 Nov;76(11):1454-1464. doi: 10.1111/anae.15560. Epub 2021 Aug 9.
5. Mattoo S, Agarwal A, Mayilvaganan S, Mishra P, Agarwal G, Mishra A, Chand G, Gupta SK, Mishra SK. Role of postoperative intact serum PTH as an early predictor of severe post-thyroidectomy hypocalcemia: a prospective study. "J Endocrinol Invest". 2021 https://doi.org/10.1007/s40618-021-01511-w
6. Agarwal G, Valiveru RC (Joint first authors), Agrawal V, Mayilvaganan S, Chand G, Mishra A, Agarwal A, Mishra SK, Bhatia E. Hereditary Medullary Thyroid Carcinoma: Genotype, Phenotype and Outcomes in a North Indian Cohort. "World J Surg" 2021 World J Surg. 2021 Feb 19. doi: 10.1007/s00268-021-05993-w. Online ahead of print. PMID: 33606078.
7. COVID Surg Collaborative, GlobalSurg Collaborative, (Agarwal G). SARS-CoV-2 vaccination modelling for safe surgery to save lives: data from an international prospective cohort study. "Br J Surg", 2021 Mar 26. https://doi.org/10.1093/bjs/zxab101.
8. COVID Surg Collaborative, Global Surg Collaborative, (Agarwal G). Timing of surgery following SARS-CoV-2 infection: an international prospective cohort study. "Anaesthesia". 2021 Mar 9. doi: 10.1111/anae.15458. Epub ahead of print. PMID: 33690889.
9. Bichoo RA, Mishra A, Lal P, Chand G, Agarwal G, Agarwal A, Mishra SK. Quality of Life (QoL) in Postmenopausal Breast Cancer Patients Receiving Adjuvant Hormonal Therapy. "Indian J Surg" 2021. E-pub ahead of print. https://doi.org/10.1007/s12262-021-02766-6
10. Kapoor A, Baronia AK, Azim A, Agarwal G, Prasad N, Misra R, Saraswat VA. Breathability and safety testing of personal protective equipment: the "Human Comfort" factor remains undefined. "Indian J Crit Care Med", 2021 Jan;25(1):12-15. doi: 10.5005/jp-journals-10071-23598.
11. Sharanappa V, Mishra A, Bhatia V, Mayilvagnan S, Chand G, Agarwal G, Agarwal A, Mishra SK. Pediatric Primary Hyperparathyroidism: Experience in a Tertiary Care Referral Center in a Developing Country Over Three Decades. "World J Surg" 2021 Feb;45(2):488-495. doi: 10.1007/s00268-020-05816-4. Epub 2020 Oct 12. PubMed PMID: 33047232.



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12. Panchangam R, Kota S, Mayilvaganan S, Kuravi B. What is the impact of thyroidectomy on autoimmune features associated with Hashimoto's thyroiditis?--Institutional experience. *Nigerian Journal of Clinical Practice*. 2021 Jun 1;24(6):905-.8.
13. S. Idrees, S Mayilvaganan, S Bothra, V Mahalakshmi, Comment on: Post-thyroidectomy bleeding: analysis of risk factors from a national registry, *British Journal of Surgery*, Volume 108, Issue 9, September 2021, Page e305, <https://doi-org.eres.qnl.qa/10.1093/bjs/znab166>
14. Rao SS, Mayilvaganan S. Immuno-oncology of differentiated thyroid cancer. *Int J MollImmuno Oncol* 2021;6(2):72-5.
15. Idrees S, Mayilvaganan S. The Imminent Sign of SVC Syndrome Secondary to Retrosternal Goiter. *J Endocr Surg*. 2021 Dec;21(4):118-122. <https://doi.org/10.16956/jes.2021.21.4.118>
16. Devgan Y, Idrees S, Mayilvaganan S. Letter to editor: "Sim life model: introducing a new teaching device in endocrine surgery simulation". *Updates Surg*. 2022 Jan 10. doi: 10.1007/s13304-021-01221-1. Epub ahead of print. PMID: 35001251.
17. Rahul R, Yadav P, Singh A, Mayilvaganan S et al. Impact of COVID-19 Pandemic Forced Lockdown on Non-COVID Super-specialty Surgical Case Management in India. *Indian J EndocSurg Res* 2021; 16(2):70-76
18. Mayilvaganan S, Idrees S. Comment on "Effectiveness and Safety of Thermal Ablation in the Treatment of Primary Hyperparathyroidism: A Multicenter Study" Published in *JCEM*. *Indian J EndocSurg Res* 2021;16(2):87.
19. Mayilvaganan S, Idrees S, Bhargav PR, et al. Acute Suppurative Thyroiditis and Thyroid Abscess: A Case Series in a Tertiary Care Hospital. *Indian J EndocSurg Res* 2021;16(2):88.
20. Idrees S, Ahmed F, Mayilvaganan S. Lymph Node Yield in Papillary Thyroid Cancer. *Indian J EndocSurg Res* 2021;16(2):91.
21. Idrees, Sarrah DNB (General Surgery); Hill, Andrew G. MBChB, MD (Thesis) EdD, FACS, FRACS; Mayilvaganan, Sabaretnam MS, MCh, FAES, FICS, FAIS, FISS, FRCS Letter to Editor: Comment on "Underemployment of Female Surgeons", *Annals of Surgery*: December 2021 - Volume 274 - Issue 6 - p e918-e919 doi: 10.1097/SLA.0000000000004947
22. Chand G, Gupta N, Johri G, Moidu S, Mishra A, Mishra SK Natural Orifice Endoscopic Thyroidectomy via Transoral Vestibular Approach (TOVA): Single Surgeon Experience from North India.. *Indian J Otolaryngol Head Neck Surg*. 2021 Jun;73(2):160-166. doi: 10.1007/s12070-020-01935-5. Epub 2020 Jul 7.
23. Johri G, Chand G, Mishra A Authors' Reply: Endoscopic versus Conventional Thyroid Surgery: a Comparison of Quality of Life, Cosmetic Outcomes and Overall Patient Satisfaction with Treatment.. *World J Surg*. 2021 Aug;45(8):2625-2626. doi: 10.1007/s00268-021-06129-w. Epub 2021 Apr 28.
24. Chand G, Gupta N, Johri G, Mishra A, Mishra SK Changing paradigms in endoscopic thyroid surgery: A comparison between scarless-in-the-neck axillo-breast approach and totally scarless transoral approach.. *J Minim Access Surg*. 2021 Oct-Dec;17(4):509-512. doi: 10.4103/jmas.JMAS_11_20.
25. Chand G, Yi JW, Johri G., Robotic thyroid surgery using bilateral axillo-breast approach: From a trainees' point of view. *J Minim Access Surg*. 2021 Apr-Jun;17(2):230-235. doi: 10.4103/jmas.JMAS_110_20.
26. Nisar S, Bhat AA, Singh M, Karedath T, Rizwan A, Hashem S, Bagga P, Reddy R, Jamal F, Uddin S, Chand G, Bedognetti D, El-Rifai W, Frenneaux MP, Macha MA, Ahmed I, Harris M, Insights Into the Role of CircRNAs: Biogenesis, Characterization, Functional, and Clinical Impact in

- Human Malignancies..Front Cell Dev Biol. 2021 Feb 5;9:617281. doi: 10.3389/fcell.2021.617281. eCollection 2021.
27. Bhat AA, Nisar S, Maacha S, Carneiro-Lobo TC, Akhtar S, Siveen KS, Wani NA, Rizwan A, Bagga P, Singh M, Reddy R, Uddin S, Grivel JC, Chand G, Frenneaux MP, Siddiqi MA, Bedognetti D, El-Rifai W, Macha MA, Haris M. Cytokine-chemokine network driven metastasis in esophageal cancer; promising avenue for targeted therapy. *Mol Cancer*. 2021 Jan 4;20(1):2. doi: 10.1186/s12943-020-01294-3.
 28. Ronald Kintu-Luwaga, Chitta R. Sarangi, Chand Gyan A case of papillary thyroid cancer with cutaneous involvement: Management implications, Thu, 31 Dec 2020 in East and Central African Journal of Surgery.

Book Chapters and Books

1. 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. 2021, pp 230-239.

Visiting Professors: Nil

Awards & Honors:

Prof. S.K. Mishra

- Saroj Kanta Mishra- Chairperson 17th International Conference of Telemedicine Society of India, (Telemedicon 2021), November 12-14, 2021, SGPGIMS Lucknow.

Prof. Gaurav Agarwal

- Prof SR Naik award for outstanding research investigator, 2021, SGPGIMS Lucknow.
- Prof KD Varma oration of Indian Association of Endocrine Surgeons, 2021.

Dr. Anjali Mishra

- Academic Editor Journal of The Breast Journal wef September 2021.
- Guest Editor Indian Journal of Surgery (official indexed journal of Association of Surgeons of India) special issue on Endocrine Surgery 2021-2023.

Dr. Sabaretnam M.

- Fellow of Royal College of Surgeons Glasgow 2021
- Fellow of American College of Surgeons 2021

Dr. KMM Vishvak Chanthar

- **First Prize** – Best Research Paper Award – “Cardiac Changes in Pheochromocytoma and their reversal After Curative Surgery – PheoCard Prospective Study” presented in 81st Annual Conference of Association of Surgeons of India, ASICON, December 2021.

Dr. Sarrah Idrees

- Awarded .Dr. A J Bensam (1st) Prize in Poster Presentation at Indian Association of Endocrine Surgeons virtual conference in 2021.
- Awarded Prof S. Vittal award in Paper presentation in Association of Surgeons of India (ASICON) in 2021.



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- Awarded Dr Sarath Chandra Travelling Fellowship in Indian Association of Endocrine Surgeons conference 2021.
- Awarded 1st Prize in Endocrine surgery quiz at Indian Association of Endocrine Surgeons virtual conference in 2021.

Departmental Highlights:

- The department continued full-fledged cancer care for breast cancer patients even at the peak of second and third waves of COVID, utilizing the best possible safety protocols for patients and healthcare workers.
- Continued to provide surgical treatment to endocrine cancer patients including minimally invasive surgeries (endoscopic and robotic) with utmost precautions despite Covid scare.
- Participated in Globalsurg - CovidSurg. Week. An international multi- centre cohort study on determining the optimal timing for surgery following SARS-CoV-2 infection.
- Faculty and residents contributed to the Covid care activities of the institute, and shouldered the burden of care of patients suffering from COVID admitted in various ICUs and HDUs of the institute.
- 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 2021) and in October- the breast cancer awareness month.

New Initiatives:

- Initiated/ further expanded community outreach activities, and initiated the SGPGI Breast & Cervical Cancer Awareness and Early Detection Programme (SGPGI- BCCAEDP), which was launched on 17th September 2021 by the Hon Governor of UP Smt Anandiben Patel ji from Raj Bhavan. Under this programme, women in the age group of 35-70 years age residing the Tehsil Mohanlalganj will be imparted awareness regarding early diagnosis of breast and cervical cancer and would be screened for these two cancers by public health workers.
- Initiated sapling plantation drive on the occasion of departments foundation day.

Patents: none



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DEPARTMENT OF GASTROENTEROLOGY

STAFF

Name of Faculty Members:

- | | |
|---|--|
| 1. Dr. Vivek A Saraswat, MD, DM, FACG, FSGEI | Professor & HOD
(Retired on 30.9.2021) |
| 2. Dr. Rakesh Aggarwal, MD, DM, FNA, FASc., FNASc., FAMS | Professor
(on deputation Director,
JIPMER, Puducherry) |
| 3. Dr. Uday C Ghoshal, MD, DNB, DM, FACG, FAMS, FRCP, RFF | Professor
(Head from 01.10.2021) |
| 4. Dr. Praveer Rai, MD, DM | Professor |
| 5. Dr. Samir Mohindra, MD, DM | Professor |
| 6. Dr. Amit Goel, MD, DM | Additional Professor |
| 7. Dr. Gaurav Pande, MD, DM | Additional Professor |
| 8. Dr. Anshuman Elhence, MD, DM | Assistant Professor
(Contractual)
from 9.6.2021 |
| 9. Dr. Akash Mathur, MD, DNB, DM, MNAMS | Assistant Professor
(Contractual bond)
from 13.8.2021 |

Activities

Awards and recognitions

Dr. Akash Mathur

- Best Senior Resident Award of 37th Foundation Day of SGPGI

Dr. Gaurav Pandey

- Best Paper Award in Medical Category as Additional Professor in 2nd Research Day of SGPGI

Dr. Uday C Ghoshal

- Top 2% Scientists of the World in Stanford University Survey
- Top cited paper award of Neurogastroenterology and Motility
- Editor in Chief, Indian journal of Gastroenterology
- Invited in several prestigious national and international conferences as speaker

Dr. Rakesh Aggarwal

- Top 2% Scientists of the World in Stanford University Survey
- Director, JIPMER, Puducherry



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Membership and fellowship of societies

Dr. Akash Mathur

- Member of Indian Society of Gastroenterology
- Member of Indian Neurogastroenterology and Motility Association

Dr. Gaurav Pandey

- Fellowship in Gastroenterology and Hepatology (focused on Liver Transplantation)
- Post-Doctoral Fellowship in Advanced Therapeutic Endoscopy
- Training in Metabolic Endoscopy (ERASME Hospital Brussels)
- Training in Metabolic Endoscopy (Endoscopic Sleeve Gastroplasty)
- Member of Indian Society of Gastroenterology
- Member of Indian National Association for study of Liver

Dr. Uday C Ghoshal

- Fellowship of National Academy of Sciences
- Fellowship of American College of Gastroenterology
- Master of the Indian Society of Gastroenterology

Dr Rakesh Aggarwal

- Fellowship of Academy of Medicine
- Fellowship of National Academy of Sciences

Dr Vivek A Saraswat

- Fellow of American College of Gastroenterology
- Fellow of Society of Gastrointestinal Endoscopy of India

Dr Samir Mohindra

- Member of Society of Gastrointestinal Endoscopy of India

Teaching Workshops/ CME's organized (2021)

1. POEM Workshop by visiting Professor Dr Soumya Jagannath (AIIMS)
2. GETT workshop for technicians
3. Group Awareness for Patients (GAP) sessions in OPD
4. COVID-19 educational sessions in collaboration with Mamta Foundation

Services

Year-wise available clinical data (last three years 2019, 2020, 2021) for department of Gastroenterology

Sl. No.	Parameters	2019	2020	2021
1	Number of new patients in OPD	6400	3430 (e-OPD 2670, new consult 239)	8323
2	Number of Old/ Follow-up patients in OPD	24356	1037	30444

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3	Total patients in OPD	30756	4467	38767
4	Total number of patients admitted (IPD)	2980	1420	1870
Total number of endoscopy procedures done				
1	Endoscopic Sclerotherapy OR Varix Ligation Or Glue injection	8	5	11
2	Upper GI Endoscopy Diagnostic	3034	2560	4154
3	Upper GI Endoscopy Therapeutic or APC or Polypectomy	18	12	26
4	EVL or EST follow up	645	620	987
5	PEG	1	1	1
6	Single Balloon Endoscopy	12	10	20
7	Endoscopic Foreign Body Removal	2	2	3
8	Full colonoscopy Therapeutic	24	20	35
9	Short colonoscopy Therapeutic	20	12	30
10	Full colonoscopy (diagnostic)	856	630	1241
11	Short colonoscopy (diagnostic)	720	520	879
12	Anal Endoscopic Ultrasound	0	0	0
13	Endosonography Diagnostic (EUS)	345	130	590
14	Endosonography Therapeutic (EUS)	25	15	36
15	Therapeutic ERCP	434	200	822
16	Diagnostic ERCP with papillotomy	10	8	15
17	Balloon dilatation for achalasia cardia	24	15	33
18	Esophageal dilatation SG or CRE or SEMS placement	56	35	77
19	Naso Jujenal Tube Replacement	36	10	129
20	Side-viewing Endoscopy (diagnostic)	46	30	70
21	Side-viewing Endoscopy with biopsy	10	8	14
22	Antral CRE dilatation or SEMS	8	5	15
23	Endoscopic Submucosal Resection (ESD)	5	2	7
24	Submucosal Transluminal Endoscopic Resection (STER)	0	0	0
25	Endoscopic Mucosal Resection (EMR)	0	0	0
26	Per Oral Endoscopic Myotomy (POEM)	5	0	22
Total endoscopy procedures		6344	4850 (Grossly low as it was closed due to COVID-19)	9217
GI pathophysiology & manometry laboratory procedures				
1	Esophageal Manometry	140	80	224
2	Rectal Manometry	200	162	321
3	24-hour pH metry	25	10	51
4	Biofeedback	20	15	31
5	Balloon expulsion test	150	102	203

6	Capsule Enteroscopy	15	10	22
7	D-xylose	64	48	96
Total GI pathophysiology & manometry laboratory procedures		614	427 (Grossly low as it was closed due to COVID-19)	948
GE laboratory tests				
1	Anti HBe	768	630	1004
2	Anti HBs	624	424	853
3	Anti HCV	7568	5620	9421
4	Anti HEV	645	420	754
5	HBVDNA	1345	1160	1616
6	HBeAg	634	456	977
7	HbsAg	8345	6131	11997
8	HCVRNA	334	286	567
9	Anti HAV	556	354	791
10	Anti HBc	323	203	407
11	Blood Ammonia	111	90	192
12	Stool fat (Quantitative: Van De Kamer)	22	15	34
13	Stool Fat: Sudan Stain	556	456	932
14	Urine D-xylose / Blood D-xylose	65	46	92
15	Fibroscan	1870	1270	2814
TotalGE laboratory tests		23766	17201 (Low due to COVID-19)	32451

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 DM examination: 6

Number of students who passed in final year DM examination: 6

Research Projects

Completed

- Title: Assessment of endotoxins and cytokines in Acute on chronic liver failure (ACLF) patients with large ascites and acute kidney injury with slow albumin, vasoconstrictor and iv diuretics therapy versus albumin and vasoconstrictors and oral diuretics

Intramural Project;(A-07-PGI/IMP/79/2018) Rs/-5,00,000 2 YEARS from (February 2019 to 2021).

Paper Published: 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, Karanesh 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}. 2022 Sep 1;15:5027-39. . J Inflamm Res; 2022 Sep 1;15:5027-5039

2. To study the role of food supplementations, including probiotic preparation VSL#3 in reduction of intestinal permeability and blood endotoxin levels in child B cirrhosis. Intramural Project; (A-10-P)GI/IMP/79/2018 Rs/-5,00,000 2 YEARS .(Project was transferred in March 2020.).Project finished. Paper in review.

Research progress

Ongoing

1. Genetic risk factors and biomarkers of Non-alcoholic fatty liver disease, 2021-2022. Funding: ICMR (PI: Dr Samir Mohindra) (funding amount: 48 lakhs) (duration : 2021-2024).Status ongoing, currently 160 subjects recruited out of 200 total decided
2. 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: Ongoing.
3. 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.
4. Multicentric, phase IV, randomized, double blind, placebo controlled trial to assess effectiveness and safety of Lactobacillus 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: Ongoing.
5. 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: Ongoing.
6. Indian consensus on IBS. Funding: Bowel disease UK (PI: Dr. Uday C Ghoshal) (funding amount: 3.5 lakhs) (duration: 2021-2023). Status: Ongoing.
7. 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.

Publications:

1. Jung HK, Tae CH, Song KH, Kang SJ, Park JK, Gong EJ, Shin JE, Lim HC, Lee SK, Jung DH, Choi YJ, Seo SI, Kim JS, Lee JM, Kim BJ, Kang SH, Park CH, Choi SC, Kwon JG, Park KS, Park MI, Lee TH, Kim SY, Cho YS, Lee HH, Jung KW, Kim DH, Moon HS, Miwa H, Chen CL, Gonlachanvit S, Ghoshal UC, Wu JCY, Siah KTH, Hou X, Oshima T, Choi MY, Lee KJ; Korean Society of Neurogastroenterology and Motility. 2020 Seoul Consensus on the Diagnosis and Management of Gastroesophageal Reflux Disease. J Neurogastroenterol Motil. 2021; 27: 453-481.
2. Kumar S, Patel GK, Ghoshal UC. Helicobacter pylori-Induced Inflammation: Possible Factors Modulating the Risk of Gastric Cancer. Pathogens. 2021; 10:1099.

3. Elhence A, Kulkarni A, Ghoshal UC. Metabobariatric Endoscopy: Deflating the Balloons of Myth. *Clin Transl Gastroenterol.* 2021; 12: e00413.
4. Singh R, Zogg H, Wei L, Bartlett A, Ghoshal UC, Rajender S, Ro S. Gut Microbial Dysbiosis in the Pathogenesis of Gastrointestinal Dysmotility and Metabolic Disorders. *J Neurogastroenterol Motil.* 2021; 27: 19-34.
5. Wei L, Singh R, Ro S, Ghoshal UC. Gut microbiota dysbiosis in functional gastrointestinal disorders: Underpinning the symptoms and pathophysiology. *JGH Open.* 2021; 5: 976-987.
6. Ghoshal UC. Antibiotic treatment for small intestinal bacterial overgrowth: Is a cocktail better than a single? *United European Gastroenterol J.* 2021; 9: 643-644.
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27. Tiwari P, Katiyar H, Rai P, Goel A. Use of Sofosbuvir/Velpatasvir/Voxilaprevir for Sofosbuvir Nonresponder Genotype 3 HCV Infection in India. *J Clin Exp Hepatol.* 2022 Mar-Apr;12(2):669-671. doi: 10.1016/j.jceh.2021.06.023. Epub 2021 Jul 3. PMID: 35535079; PMCID: PMC9077182.
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29. Goel A, Bhadauria DS, Kaul A, Verma A, Tiwari P, Rungta S, Rai P, Gupta A, Aggarwal R. Acute hepatitis C treatment in advanced renal failure using 8 weeks of pan-genotypic daclatasvir and reduced-dose sofosbuvir. *Nephrol Dial Transplant.* 2021; 36: 1867-1871.
30. Nishith N, Rao RN, Rai P. Cytologic Categorization with Risk Stratification of Endoscopic Ultrasound-Guided Fine Needle Aspiration from Pancreatic Lesions Based on Guidelines of the Papanicolaou Society of Cytopathology: 12-Year Tertiary Care Experience. *Discoveries (Craiova).* 2021; 9:e134.

Book Chapters

1. Natural history of Non-alcoholic fatty liver disease. Vivek Saraswat, Vinod Kumar, Gaurav Pande; GI Clinical Updates Issue –I

Visiting Professor

1. Dr Soumya Jagannath from AIIMS, New Delhi for the POEM training

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 good number of observers coming from outside the state as well as from abroad for training. Though there was restriction for observers coming to the Department during this year, yet the following observers came during 2021: Dr. Renu, from Apollo, Ludhiana, Dr. J S Hansh Reddy, from Chennai and Dr. Mohammed Hussain Alwan Alsalamy, from Baghdad, Iraq .

New initiatives

1. Establishing an Advanced GI Endoscopy Center with upgradation of facilities
2. Advanced centre for Gastrointestinal Pathophysiology and Motility
3. Increase in number, scope and dimension of research with thrust areas as being Hepatitis E, Treatment of Hepatitis B and C, Luminal disorders of GI, and GI physiology.



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DEPARTMENT OF HEMATOLOGY

STAFF

Name of Faculty Members:

1. SoniyaNityanand, 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
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

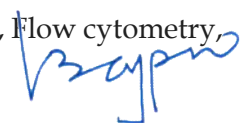
Awards, Honours, and Recognitions

Rajesh Kashyap:

- Guest Speaker of the Webinar: Optimizing anticoagulation therapy. NOACs for VTE treatment-transforming clinical practice; January 15, 2021.
- Guest of Honor: Script writing and material development workshop on health and risk communication to fight against COVID-19. Indian Science Communication Society (ISCOS) and department of mass communication and journalism; March 2-3, 2021.
- Guest Speaker. Workshop on Folk Media and Outreach Programmes in district Lucknow to fight against COVID 19. Indian Science Communication Society (ISCOS) and department of Mass Communication and Journalism; October 18-25, 2021.
- Guest Speaker. Management of inhibitors in Hemophilia& EHL. Hemophilia Society (Lucknow); April 30, 2021.

Ruchi Gupta:

- Panel discussion in hemophilia. Project ECHO Training program on PediatricHematology-Oncology. Department of PediatricHematology-Oncology; September 17, 2021.
- Case presentation in Coagulation disorders. Online teaching Program, PG teaching group (National Virtual Program); April 19, 2021 Online
- Monitoring response to TKI therapy, Hematocon, 2021.
- Pursue 18C - Online PG teaching Program: CLL - Classification, Morphology, Flow cytometry, Molecular and Prognostic markers; December 14, 2021.
- Members, Molecular pathology Association of India



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- Members, The Cytometry Society of India

Members, Indian Society of Hematology and Blood Transfusion

Khaliqur Rahman:

- Best Research Paper Awards under Addl Professor in Pre/Para/Basic category at 2nd annual research Day; December 14, 2021.
- Diagnostic Approach towards Plasma cell neoplasm. CME on Hematological neoplasm and CRF. Organized by Society of Renal Nutrition and Metabolism and UP-API (Online); May 2, 2021
- Workshop on Flow cytometry in Plasma cell neoplasm. 4th Indian Myeloma Congress (Online); April 23-25, 2021
- Case studies of Acute Leukemia. Indo Us Flow cytometry Workshop; (Online); February 22-28, 2021.
- WHO guidelines for the classification of acute leukemia. Advances in Clinical Flow cytometry (Online). January 20-21, 2021.
- Member of 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:

- Organization of Workshop on 2nd Hemophilia and Thalassemia Update"; April 9-10, 2021.
- Diagnosis of ITP- Hematocon (National Virtual Conference); November 10, 2021.
- Sample collection, transportation, preparation of platelet poor and rich plasma- Online teaching Program, PG teaching group (Online (National Virtual Program); April 8; 2021.
- Case presentation in Coagulation disorders. Online teaching Program, PG teaching group (Online National Virtual Program); April 19; 2021.
- Member, Internatl Society of ThrombHaemost : Membership#60995146
- Member, Indian Society of Hematology & Blood Transfusion : Membership#L-1491

Anshul Gupta:

- Life Member of Pediatric Hematology and Oncology chapter of Indian academy of pediatrics. Life Member of Indian Academy of Pediatrics (Since 2007)

Sanjeev:

- National Myeloma quiz at Indian Myeloma academic Groupe Annual meeting (online); April 2021.
- Qualified European Bone marrow transplant Examination; March 2021.
- Member, Indian Soc of Hematology & Blood Transfusion : Membership#L/144
- Member, European Hematology Association : Membership#014359
- Member, American soc of Hematology : Membership#1399461



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- Member, Indian soc of Blood & marrow transplantation : Membership#108
- Member, Eur Soc of blood& marrow transplantation : Membership# CIC10250
- Member, Indian Myeloma academic Group : Membership#117
- Member, British Soc of Hematology : Membership# 50155

Manish Kumar Singh

- Invited lecture on “Application of Genomics in Haemato-oncology Practice”, pre-conference CME of APCON-2021; December 01, 2021
- Organized Myeloma FISH workshop in Indian Myeloma Congress,; April 23-24, 2021.

Vinod Verma

- International seminar on “Emerging Strategies in the fight against COVID-19 and other contagions”, Jamnuary 25, 2021.

Services

Clinical/Lab Services	2019	2020	2021
OPD Patients (New & Follow up)	17,888	15,621	30,765
IPD Patients (Ward Admissions)	3306	2139	1813
Bone Marrow Biopsy Procedures	2632	1550	1697
Bone Marrow Aspirate Procedures	2731	1522	3955
BMT	10	06	21
Morphology Lab Investigations			
PLT	23113	16382	20884
TLC.	22984	18668	21150
RBC	21617	16287	1861
DLC	2837	865	8541
HCT	14630	9090	1909
RETIC	2232	908	2672
Serum Erythropoietin	4036	1961	230
Mean Platelet Volume	104	62	188
Red Cell distribution width	182	50	158
MCV/MCH/MCHC	902	250	3009
Peripheral Smear	5054	1979	4811
Specific Immunophenotype	6	10	38
Lymphoma Screening panel	5	6	42
Lymphoma Diagnostic Panel	6	12	104
Review of BM aspirate/Imprint	79	37	49
LeukemiaPanel(IHC)	-	0	112
Lymph node biopsy	-	11	129

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Flow Cytometry Lab Investigations			
Acute Leukemia Panel	398	245	227
B-ALL MRD	213	212	231
Clonality Panel	38	32	110
CLL panel	29	10	22
PNH panel	93	44	381
CLPD panel	368	200	52
MDS Screening Panel \	28	20	30
Stem Cell panel	47	37	115
Specific Single tube	26	49	91
T-ALL MRD	47	61	57
OFT	-	-	25
Myeloma Lab Investigations			
Beta-2 Microglobulin	165	98	151
Serum Immunofixation	607	353	673
Serum Kappa FLC	2467	1023	1852
Serum Lambda FLC	2465	1024	1859
SPE with absolute quantification of M Band	3195	1282	2156
UE with % quantification of M-band	178	74	105
Coagulation Lab Investigations			
PT	30955	10609	12042
APTT	5611	4313	4836
Activated Protein-C Resistance assay	51	27	14
Factor-V Leiden Mutation	277	146	218
Platelet Function Test	40	8	13
Von Willebrand Factor Assay	75	42	59
Thrombin Time	45	21	65
Anti Beta2 gp1 Antibody Screening test	555	175	347
Factor-VIII levels	210	50	70
Protein-C Function Assay	221	106	159
Antithrombin-III Function Assay	189	82	120
Lupus anticoagulant	1081	408	775
Protein-S -Function Assay	226	100	159
APTT with Mixing Study	215	9	34
Factor-IX levels	61	11	48

Ristocetin induced platelet aggregation test	18	4	8
Plasma Fibrinogen	589	573	342
Factor V Function Assay	8	31	10
Factor VII Function Assay	0	1	1
Factor X Function Assay	0	1	7
Factor VIII Inhibitor (Bethesda Assay)	9	19	37
Factor IX Inhibitor (Bethesda Assay)	1	0	1
Inhibitor Screening	36	85	115
Factor XIII Screening Test	1	4	13
Molecular Hematology Lab Investigations			
B-RAF V600E_HCL	1	3	5
BCR-ABL Real Time PCR (Quantitative	1755	746	1169
CMV Real Time PCR	48	35	92
FLT3-ITD & NPM1 Multiplex PCR	48	40	37
FLT3-TKD (exon-20)	20	29	18
Jak2 Mutation (V617F)	199	94	159
PML-RARA qualitative	64	42	62
RT-PCR ALL Panel	62	18	0
RT-PCR AML1-ETO	42	33	26
RT-PCR BCR-ABL (p210-p190)	154	61	92
BCR-ABL1 Kinase Domain mutation	120	-	95
MYD88 mutation analysis	6	-	5
Transplant Biology Lab Investigations			
BMT-Chimerism	19	30	32
HLA Typing fof Family for BMT	79	46	78
HLA Typing (Class I + II)	0	0	0
HLA Typing class II	3	0	0
Medico-legal Paternity Testing	0	0	0
_HLA Typing of donor for BMT	38	14	21
Cytogenetics Lab Investigations (Created: 2020			
ALL Reflex FISH Panel	Nil	72	60
Double Hit Lymphoma FISH panel (c-MYC,BCL2 & BCL6 gene rearrangement	Nil	9	2
FISH for ATM (11q22)/TP53(17p13) gene deletion in CLL	Nil	12	28
FISH for t(11:14)/1gh-CCND1 fusion	Nil	9	

FISH for del (17p13)TP53deletion	Nil	6	22
FISH for del (5q)	Nil	2	6
FISH for t(15;17)/PML-RAPa fusion	Nil	9	14
FISH for del (7q)	Nil	8	1
FISH for ABL1 gene rearrangement	Nil	13	2
FISH for PDGFRb gene rearrangement	Nil	4	1
FISH for t(12;21)ETV6-RUNXI1 fusion	Nil	1	0
FISH for c-MYC gene rearrangement	Nil	3	1
FISH for t(9;22)/BCR-ABL 1 Fusion	Nil	14	89
FISH for KMT2A(MLL) gene rearrangement	Nil	2	238
BM/PB Karyotyping	Nil	62	46
Stress Cytogenetics Test	Nil	7	27
FISH got in (16)/CBFb rearrangement	Nil	3	7
FISH for KMT2A (MLL gene rearrangement)	Nil	-	1
Microbial Hematology Lab (Created: 2020)			
Serum and BAL Galactomannan Assay	Nil	39	663

Training

1. PhD Student (Undergoing training/ passed) : Eight
2. DM Student (Undergoing training/ passed) : 12 (09/03)
3. PDCC student (Undergoing training/ passed) : Three
4. Short-term trainees : Six

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

New Course: "Epigenetics in Human Health and Diseases" the 01/02 optional course for PhD and DM students of the Institute

Research Completed

Funding Agency: SGPGIMS

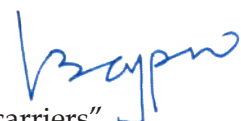
Title of the project: "Role of peripheral blood dendritic cell count as a potential biomarker in Hodgkin Lymphoma"

Results Arrived: The multi-parametric flow-cytometry of blood dendritic cells (DC) showed a lower count of myeloid DC-1 and DC-2 and plasmacytoid DC in the untreated classical Hodgkin Lymphoma patients (n=52) and their normalization following treatment of the patients (n=26). Thus DC may contribute to the disturbed immunological interplay in the disease.

Research in Progress

Funding Agency: NHM, Govt. of India.

Title of the Project: "Strategies for early detection and counseling of thalassemia carriers".



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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"

Funding Agency: SGPGIMS.

Title of the project: "Evaluation of peripheral blood Dendritic cell subset count as a potential biomarker in classical Hodgkin Lymphoma".

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: "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: SERB DST, Govt. of India

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

Funding Agency: SERB-DST, 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

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: 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 Assay"

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: 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"

Publications

Indexed Publications:

1. Chandra D, Singh MK, Gupta R, Rahman K, Yadav DD, Sarkar MK, Gupta A, Yadav S, Kashyap R, Nityanand S. Clinicopathological and immunophenotypic features of early T cell precursor acute lymphoblastic leukemia: A flowcytometry score for initial diagnosis. *Int J Lab Hematol* 2021; 43: 1417-1423. Doi:10.1111/ijlh.13621.
2. Chauhan P, Gupta A, Mandelia A, Yadav S, Rahman K, Nityanand S. Clinical Profile, Outcome & Challenges In The Management Of Paediatric Burkitt Lymphoma: A Single Centre Experience. *PediatrHematolOncol* 2021; 38: 305-318. doi: 10.1080/08880018.2020.1865493.
3. Gutierrez-Prat N, Cubillos-Rojas M, Cánovas B, Kuzmanic A, Gupta J, Igea A, Llonch E, Gaestel M, Nebreda AR. MK2 degradation as a sensor of signal intensity that controls stress-induced cell fate. *Proc Natl Acad Sci U S A*. 2021 ;118: e2024562118. doi: 10.1073/pnas.2024562118
4. Garg A, Aggarwal M, Kashyap R. Pregnancy and its successful outcome in a patient with multiple myeloma. *J Obstet Gynecol India* 2021; 71: 78-81. doi: 10.1007/s13224-019-01296-2

5. Hasan F, Parashar Y, Rao RN, Kashyap R. Leionine Facies: a unique presentation of T-prolymphocytic leukemia. *Ind J PatholMicrobiol* 2021; 64: 817-819.
6. 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 .
7. Kumar M, Sarma DK, Shubham S, Kumawat M, Verma V, Singh B, Nagpal R, Tiwari RR. Mucormycosis in COVID-19 pandemic: Risk factors and linkages. *Curr Res Microb Sci* 2021; 2: 100057. doi: 10.1016/j.crmicr.2021.100057.
8. Kumar M, Sarma DK, Shubham S, Kumawat M, Verma V, Nina PB, Jp D, Kumar S, Singh B, Tiwari RR. Futuristic Non-antibiotic Therapies to Combat Antibiotic Resistance: A Review. *Front Microbiol* 2021;12: 609459. doi: 10.3389/fmicb.2021.609459.
9. Kumar S, Rahman K, Singh MK, Chandra D, Gupta A, Gupta R, Kashyap R. Waldenstrom Macroglobulinemia: Clinico-pathological profile and treatment outcomes of patients from tertiary care centre of North Indian . *Indian J Hematol Blood Transfus* 2021; 37: 386-390.2021; 37: 386-390. doi: 10.1007/s12288-020-01382-w.
10. Kureel AK, Saini S, Singh B, Singh K& Rai AK. Compromised levels of CD6 and reduced T cell activation in the aged immune system. *Biomarkers* 2021; 26:483-490. doi: 10.1080/1354750X.2021.1921030.
11. Nabi R, Alvi SS, Shah A, Chaturvedi CP, Faisal M, Alatar AA, Ahmad S, Khan MS. Ezetimibe attenuates experimental diabetes and renal pathologies via targeting the advanced glycation, oxidative stress and AGE-RAGE signalling in rats. *Arch Physiol Biochem*2021; 29; 1-16. doi: 10.1080/13813455.2021.1874996.
12. Patra PC, Srivastava A, Lal H, Kashyap R. Mycotic aneurysm of brachial artery in case of aplastic anemia. *J Assoc Physicians India* 2021; 69 (2), 73-74
13. Singh B, Mal G, Verma V, Tiwari R, Khan MI, Mohapatra RK, Mitra S, Alyami SA, Emran TB, Dhama K, Moni MA. Stem cell therapies and benefaction of somatic cell nuclear transfer cloning in COVID-19 era. *Stem Cell Res Ther* 2021;12: 283. doi: 10.1186/s13287-021-02334-5.
14. Singh B, Singh D, Verma V, Yadav R, Kumar R. Angiotensin-converting enzyme 2 as a potential therapeutic target for COVID-19: A review. *J Pharm Anal* 2022; 12: 215-220. doi: 10.1016/j.jpha.2021.12.003.
15. Yadav VK, Kumar A, Tripathi PP, Gupta J. Long noncoding RNAs in intestinal homeostasis, regeneration, and cancer. *J Cell Physiol* 2021; 236: 7801-7813. doi: 10.1002/jcp.30393.

Non-Indexed Publications: None

Chapter(s) in Book(s):

1. Alam F & Rahman K. Platelet Substitute. In Denzli A, Nguyen TA, Mariappan R, Alam F and Rahman K eds. *Nanotechnology for Hematology, Blood Transfusion and Artificial Blood*. Elseviers ISBN : 9780128239711 Sept 2021
2. Rahman K. *Nanotechnology for Hematology, Blood Transfusion and Artificial Blood*. Elseviers ISBN : 9780128239711 Sept 2021.

Book(s): None

Visiting Professors: None



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Departmental Highlights

Department is serving as Nodal centre of State of Uttar Pradesh for Haemophilia Control Program under National Health Mission, Govt. of India.

New Initiatives

Physiotherapy Unit and Central Venous Access Device Unit started on 21st October, 2021

Patents: None

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DEPARTMENT OF HOSPITAL ADMINISTRATION

STAFF

Name of Faculty Members:

1. Dr. Rajesh Harsvardhan Addl. Prof. and Head

Awards & Honours Conferred to Faculty Members

1. In order to felicitate the exemplary contribution of SGPGIMS under AB-PMJAY for providing cashless benefit to the concerned beneficiaries, SGPGIMS has been awarded by the then Hon'ble Health Minister Sri Jai Prakash Singh on 26th September, 2021 for outstanding performance on account of implementation of Ayushman Bharat in SGPGIMS
2. Dr. R. Harsvardhan & Dr. Ruchi Kushwaha won the 2nd best national award in the research paper presentation in SASH 2021, Amrita Medical College for the paper on the topic 'Technology to Heal: Building Synergies & Affordable Healthcare'
3. Appointed as Guest Faculty at HNB Uttarakhand Medical University, since 19th April 2021
4. Invited to deliver a talk on topic 'Philosophy and Principal of Ethics' in National Webinar on Medical Ethics & GCP (Clinical Practices), organised by IEC, Chandan Hospital, Lucknow and Association of Research Professionals, Lucknow, on 5th Dec 2021
5. Delivered a talk on talk on Redefining Indian Healthcare in the Virtual National Conference 2021
6. Expert Faculty at the "Meet the Expert" session on Topic: MEET THE EXPERTS: Hospital design & construction, Sub topic: Construction/renovation guidelines, 30th July 2021 at HISICON 2021.

Service

Administrative Activities:

Accomplishments of SOTTO - U. P. Since Commissioning despite Covid

1. In order to ensure the documented proof of consent and to boost the Deceased Organ Donor Pool in Uttar Pradesh, SOTTO took the initiative & has ensured making a response mandatory by the applicants in the declaration under the 'Organ Donor' option available in online Driving License application form in Uttar Pradesh
2. Drafting of Standard Operating Protocol for Living Donor & Organ Transplantation for Transplant units in Uttar Pradesh
3. Draft recommendations by SOTTO, U.P., Technical Committee for Drafting the Policy Pertaining to Deceased Donor Organ Transplantation was undertaken by SOTTO - U. P.
4. Organ Donation Pledge Drive was initiated across U. P. in order to increase the organ donor pool of Uttar Pradesh & a total of 723 pledges were obtained
5. Awareness program on 'Organ & Tissue Donation - Be a Miracle Maker' was conducted across Schools of Lucknow and a poster making competition captioned with slogan was organized after the session on every Saturday from 4th to 25th September, 2021
6. The winners of the Poster Making competition were felicitated on the occasion of 38th Foundation Day Celebration of SGPGIMS on 14th Dec, 2021 and the posters of the winners were displayed.

The contribution of Department of Hospital Administration in the institute in the year 2021 are mentioned vide infra:

Recommissioning of Apex Trauma Center:

With the COVID-19 situation in India seemingly under control, the phase-wise recommissioning of the Apex Trauma Center was done on 8th November 2021(after second wave) for resuming service to trauma patients. The residents of Deptt. of Hospital Administration are posted 24x7 at the Control Room set up exclusively for resolving managerial issues at ATC.

Geriatric Help Desk:

On 3rd September, 2021, the inaugural ceremony of the Geriatric Helpdesk at the New OPD building in SGPGIMS was convened to facilitate better quality of services to the Geriatric population visiting the hospital & attempt to bridge the span between the patient & the doctor by easing the process of navigating through the initial formalities of the hospital.

Kiosk by Divyang:

On the occasion of International Day of Persons with Disabilities, 3rd December 2021,a Kiosk by Divyang was held in Pathway next to PMSSY Block, in its endeavor towards inclusive society has taken initiative at the behest of office of the Honorable Governor. At this Kiosk items made by especially abled will be sold by especially abled for visitors/patients in the institute.

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

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

The Department played a key role in roll out of the AB-PMJAY Scheme in the SGPGIMS . In due course of time, the department has activated 02 more such counters at ATC & GH. SGPGIMS has been awarded by the former Hon'ble Health Minister Sri Jai Prakash Singh on 26th September,2021 for treating beneficiaries & thereby supporting India's journey towards ensuring equitable access to quality health care service to all.2156 Beneficiaries are benefitted through this scheme in the year 2021.

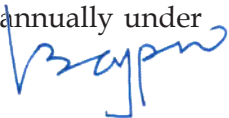
	2021
Beneficiaries	2156

Infection Control Cell:

In the year 2021, the Infection Control Cell is also involved in regular training of healthcare staff & workers on NSI, IPC Practices & Standard Precautions. The Infection Control Cell is also involved in regular training of healthcare staff & workers on NSI, IPC Practices & Standard Precautions.

Accomplishments of SGPGIMS Hospital Infection Control Committee (SHICCOM)

1. Training program on IPCP for Staff of Deptt. Of Urology on 06-11-2021
2. Training program on IPCP for Staff of SGPGIMS on 13-11-2021
3. Training program on IPCP for Staff of Deptt. Of Urology on 20-11-2021
4. The department also publishes the Hospital Infection Control Newsletter biannually under the aegis of the SGPGIMS Hospital Infection Control Committee



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Patient Safety Cell:**Accomplishments of Patient Safety Cell**

1. Capacity building & active surveillance, assisted by Patient Safety Nurse was regularly conducted by residents of the department
2. A webinar on World Patient Safety Day was organised by the Department on 17th Sept. 2021 on the WHO theme - Safe Maternal & Newborn Care
3. The department has also been entrusted with the responsibility to organise 01 Course on Patient Safety in Healthcare for residents of SGPGIMS as a part of the elective course
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):

Conducted workshop in the Department of Hospital Administration "Pharmacovigilance Practices" on 27th May 2021

	2021 (from July, 2021)
No. of ADR Reporting	27
No. of AEFI Reporting	232

Central Condemnation & Disposal Cell (CCDC):

The department for the first time since the inception of SGPGIMS has been successful in ensuring that files for condemnation of medical equipment of a total of 08 clinical department were prepared and 91st GB has approved the condemnation & final disposal of Medical Equipment/ Allied Accessories of 08 Departments of the Institute.

BMWM & Sanitation Services:

- Worked towards modernization/renovation of the entire bio-medical waste processing plant in a phase wise manner. Two new incinerators have been commissioned. Three interim storage area has been created in sync with BMW Rules and installation of 03 Autoclave.
- Significant changes in the contract enforcement & processes; infrastructure under renovation apart from augmenting the revenue being earned by >200 %

CCTV Services:

- Total No. of CCTV Cameras installed are 413
- Installation & Operation of CCTV at RCH - I (ATC)

RAN:

The Rashtriya Arogya Nidhi (RAN) scheme was implemented in SGPGIMS & a total of 17 Pre-authorizations have been conducted in the year 2021.

NIRF Ranking:

The Department took initiative and ensured that a separate category for Medical Institutes be created for NIRF Ranking in the year 2018. Subsequent to that, 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 2021, SGPGIMS has secured 5th Rank in the country from over 100 medical institutions & 2nd Rank among Medical Institutes across U. P.


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	2021
NIRF Ranking	5 th

NAAC:

The NAAC accreditation process for SGPGIMS was initiated by the Deptt. of Hospital Administration and currently the data collection process is being carried out by group of Faculties, under 07 criteria.

A dissemination seminar on the process of NAAC Accreditation was conducted on 18th September 2021 for all the faculty so as to expedite the accreditation process.

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 693 NOCs have been issued by Competent Authority & 07 NOC have been issued by Hospital Based Authorization Committee. 86 NOCs have been issued in the year 2021.

	2021
No. of NOC given in CA	86
No. of NOC given in HBAC	00

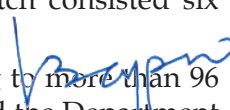
Accomplishments of Central Control Room at RCH - I & Control Room for RCH - II, Holding Area & Non COVID Areas:

- More than 7000 complaints were received & resolved through both of the Control Rooms.
- Procurement of 12 x Manual Sprayer (Backpack) for use in the institute
- Procurement of 02 Mortuary Cabinets with the capacity of storing 03 bodies in each cabinet
- The department also contributed in preparing the Compendium of Guidelines, Office Orders & Letters on Housekeeping Services, Environmental Cleaning, BMW & Dead Body Management during COVID-19 Pandemic
- Drafted the Patient Belonging consent form Policy at SGPGIMS
- Formulation of instructions to COVID-19 positive patient's relatives regarding Dead Body do's and don't's
- Drafted Laboratory sample process protocol
- Conducted OT Surveillance in COVID-19 Facility
- Drafted Policy for unused medication in COVID-19 Facility
- Containment Plan for COVID-19 Positive Healthcare workers
- Performed Active 24*7 Contact Tracing COVID-19 Positive Healthcare workers

Teaching & Training Activities:

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

- Masters in Hospital Administration (MHA):** MHA is a full-time residential post graduate teaching program being offered by the department. The ongoing sixth batch consisted six students who joined the department in September, 2021.
- Short Term Trainees (STT):** Till date the department has provided training to more than 96 STTs. In the year 2021 a total of **14 trainees** from other institute/college joined the Department


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as STT, as a part of their summer internship and all of them successfully completed the training.

iii. **IGNOU Program Study Centre:**

a. **Certificate Course in Community Health for Nurses (CCHN):**

A total of 04 batches have completed training in the department since the commencement of the program. Till 2021, 203 students have completed their training. In the year 2021 33 students have completed the course.

b. **PGDHHM:**

Till date we have conducted 21 Teaching Programmes attended by over 400 students.

Sl. No.	2021
No. of Students	09

c. **CHCWM:**

Till date we have conducted 04 Teaching Programmes. This is one of its kind in entire North U. P. & has been authorized under BMW Rules, 2016, Air Act & Water Act.

Sl. No.	2021
No. of Students	13

d. **CFAID:** This program is being run in collaboration with ATC & Department of Emergency Medicine.

Sl. No.	2021
No. of Students	80

Research Activities:

MHA Batch 2019-21 completed research on the following topics:

Projects

1. A study to assess the degree of ventilator care bundle compliance rate & its impact on VAE rate and ICU course, vis-a-vis pre obtained data from same setting, among critically ill mechanical ventilated patients at an ICU of a Tertiary Healthcare Teaching Institute in Northern India
2. A study to rationalize the Healthcare (clinical & 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
3. A study to design and implement appropriate patient centred interventions along PS, HIC, NABH & BMW parameters, system design & ergonomics so as to develop a model ward in a pre-identified indoor unit of a Tertiary Healthcare Teaching Institute in Uttar Pradesh
4. A study to introduce Patient Information Booklet and Residents' Manual as a quality initiative towards value addition in hospital services at a Tertiary Healthcare Teaching Institute in India, for use as a ready reckoner by the end users



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5. A study on critical evaluation of Patient Grievance Redressal System in vogue (by way of identifying/analyzing gaps through pre-validated tool) aiming at commissioning of Central Patient Grievance Redressal cell at a Tertiary Healthcare Facility in Northern India

Research in Progress:

1. An impact assessment study on appropriate intervention/s w.r.t. Patient Fall, subsequent to baseline Assessment of Patient Fall Rate so as to prepare evidence based Patient Fall Prevention Guidelines in pre-identified area of Tertiary Healthcare Teaching Institute in Northern India.
2. A study to assess the impact of the Physician's Emotional Intelligence (EI) on Trust, Patient-Physician Relationship & Satisfaction among in-patients at pre-identified areas of a Tertiary Healthcare Teaching Institute in Northern India, so as to make evidence-based recommendation for Emotional Quotient augmentation, if warranted
3. An impact assessment study of appropriate intervention/s w.r.t. Adverse Drug Reaction, subsequent to baseline assessment of Adverse Drug Reaction Rate in pre-identified areas of a Tertiary Healthcare Teaching Institute in Northern India so as to prepare an evidence based guidelines SOP to minimize ADRs in all the patient care areas at a Tertiary Healthcare Teaching Institute in Northern India
4. To assess the Disaster Hazard Profile, Impact of Disaster & subsequent Healthcare Utilization & Disaster Management Strategies in the selected Tertiary Health Care Teaching Institute in the city of Lucknow so as to prepare an evidence based proposal for Establishment & Commissioning of Disaster Management Cell at SGPGIMS
5. To do Cost Analysis on Total Cost incurred (including Out-of-Pocket Expenditure & Social Cost) during Renal Transplant in a Tertiary Healthcare Teaching Institute in Northern India so as to suggest an evidence based financial package for AB-PMJAY

Publications:

1. Harsvardhan R., C D Dikhil, Kalib L., Singh S., Singh R., Aravind A.; After Action Review (AAR), An Effective tool for Resilience and Quality Enhancement of Nursing Services During Unprecedented COVID Scenario, Lessons Learned from a Tertiary Healthcare Teaching Institute; Journal of the Academy of Hospital Administration; Volume 33 No. 2 July-December 2021
2. Rai R., Harsvardhan R., Hem Chandra; A Study to Assess the Current Status of KAP & the Impact of Appropriate Intervention on Compliance w.r.t. Nursing Handover in a Tertiary Healthcare Teaching Hospital of North India; Journal of the Academy of Hospital Administration; Volume 33 No. 2 July-December 2021
3. Patnaik Rupali, MD, DM; Misra Richa, MD; Azim Afzal, MD; Harsvardhan Rajesh, MD; Gurjar Mohan, MD; Baronia Arvind K., MD; Poddar Banani, MD et al; Evaluation of ventilator associated events in critically ill patients with invasive mechanical ventilation: A prospective cohort study at a resource limited setting in Northern India; Journal of Critical Care, Published July 31, 2021. Volume 64. Pages 2935.



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4. Harshvardhan. R, C D Dhikhil, Singh Saurabh, Singh Rashmi, Aravind Ambily et al; After Action Review (AAR), an effective tool for resilience and quality enhancement of nursing services during unprecedented Covid scenario, lessons learned from a Tertiary Care Teaching Hospital in Uttar Pradesh, India; Journal of the Academy of Hospital Administration, Year 2021, Volume 33, No. 02 July-December 2021
5. Dhiman RK, Harsvardhan R et al; ORGAN DONATION: A GIFT OF LIFE!!!; Journal of Indira Gandhi Institute of Medical Sciences; Year 2021 DOI:10.4103/2394-9031.331757

Chapter in Books:

Harsvardhan R. Catheterization in Lab Facility. In: Shakti Gupta, Sunil Kant, R. Chandrashekar. Planning & Designing of Specialty Healthcare Facilities. 1st edition 2021. Japye Brothers Medical Publishers. Pg: 69 – 74

Guest Faculty: None

Awards & Honours Conferred to Department:

Harsvardhan. R, Kushwaha Ruchi et al; A study on Low-Cost Model of Hospital Pharmacy at a Government Healthcare Teaching Institute, as a feed-forward measure of control

New Initiatives: None

Patents: None



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DEPARTMENT OF HEPATOLOGY

STAFF

Name of Faculty Members:

- | | |
|---|---------------------|
| 1. Radha Krishan Dhiman
MD, DM, FAMS, FACG, FRCP Edin.,
FRCP London, FAASLD | Professor & Head |
| 2. Akash Roy, MD, DM
Joined on 20 th Feb 2021 | Assistant Professor |
| 3. Surender Singh, MD, DM
Joined on 14 th June 2021 | Assistant Professor |

Departmental Activities

Awards and Recognitions

Dr Surender Singh:

- APDW-JGHF Young investigator award of merit at APDW 2021, Malaysia
- Awarded registration bursary for EASL ILC 2021

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)



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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)

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

Serial	Services	No in 2021
1	New registration in OPD	383
2	No of follow-up patients	1331
3	Total number of OPD patients	1714
4	No of ICU admission	90
5	No of patients admitted in ward	150
6	Total number of patients admitted	240

Training: None

Research Projects

1. Intramural: None
2. Extramural: None

Publications of journal articles

1. Singh S, Taneja S, Tandon P, De A, Verma N, Premkumar M, Duseja A, Dhiman RK, Singh V. High Prevalence of Hormonal Changes and Hepatic Osteodystrophy in Frail Patients with Cirrhosis-An Observational Study. *J Clin Exp Hepatol*. 2022 May-Jun;12(3):800-807.
2. Singh S, Taneja S, Tandon P, Bansal A, Gorski U, Roy A, De A, Verma N, Premkumar M, Duseja A, Dhiman RK, Singh V. A Comparison of Different Frailty Scores and Impact of Frailty on Outcome in Patients With Cirrhosis. *J Clin Exp Hepatol*. 2022 Mar-Apr;12(2):398-408.
3. Praharaj DL, Premkumar M, Roy A, Verma N, Taneja S, Duseja A, Dhiman RK. Rifaximin Vs. Norfloxacin for Spontaneous Bacterial Peritonitis Prophylaxis: A Randomized Controlled Trial. *J Clin Exp Hepatol*. 2022 Mar-Apr;12(2):336-342.
4. Thanapirom K, Teerasarntipan T, Treeprasertsuk S, Choudhury A, Sahu MK, Maiwall R, Pamecha V, Moreau R, Al Mahtab M, Chawla YK, Devarbhavi H, Yu C, Ning Q, Amarapurkar D, Eapen CE, Hamid SS, Butt AS, Kim DJ, Lee GH, Sood A, Lesmana LA, Abbas Z, Shiha G, Payawal DA, Yuen MF, Chan A, Lau G, Jia J, Rahman S, Sharma BC, Yokosuka O, Sarin SK; APASL ACLF Working Party. Impact of compensated cirrhosis on survival in patients with acute-on-chronic liver failure. *Hepatol Int*. 2022 Feb;16(1):171-182.
5. Gupta P, Vyas S, Salan T, Jain C, Taneja S, Dhiman RK, Singh P, Ahuja CK, Ray N, Govind V. Whole brain atlas-based diffusion kurtosis imaging parameters for evaluation of minimal hepatic encephalopathy. *Neuroradiol J*. 2022 Feb;35(1):67-76.
6. 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.
7. Tohra S, Duseja A, Taneja S, Kalra N, Gorski U, Behera A, Kaman L, Dahiya D, Sahu S, Sharma B, Singh V, Dhiman RK, Chawla Y. Experience With Changing Etiology and Nontransplant Curative Treatment Modalities for Hepatocellular Carcinoma in a Real-Life Setting-A Retrospective Descriptive Analysis. *J Clin Exp Hepatol*. 2021 Nov-Dec;11(6):682-690.

8. Dhiman RK, Grover GS, Premkumar M, Roy A, Taneja S, Duseja A, Arora S; MMPHCRF Investigators. Outcomes of Real-World Integrated HCV Microelimination for People Who Inject Drugs: An expansion of the Punjab Model. *EClinicalMedicine*. 2021 Oct 17;41:101148.
9. Roy A, Dhiman RK. Letter to the Editor: Recurrent Cryoglobulinemic Vasculitis in the Era of Direct-Acting Antivirals: A Story Beyond Sustained Virological Response 12. *Hepatology*. 2021 Nov;74(5):2909.
10. Premkumar M, Dhiman RK. Portal Cavernoma Cholangiopathy: Indian Perspective. *Clin Liver Dis (Hoboken)*. 2021 Oct 15;18(3):127-137.
11. Verma N, Dhiman RK, Choudhury A, Taneja S, Duseja A, Singh V, Al Mahtab M, Devarbhavi H, Shukla A, Ning Q, Hamid SS, Butt AS, Jafri W, Tan SS, Hu J, Zhongping D, Treeprasertsuk S, Lee GH, Ghazinyan H, Lesmana LA, Sood A, Midha V, Goyal O, Kim DJ, Eapen CE, Goel A, Tao H, Shaojie X, Yuemin N, Dokmeci AK, Sahu M, Singh A, Arora A, Kumar A, Kumar R, Prasad VGM, Shresta A, Sollano J, Payawal DA, Shah S, Rao PN, Kulkarni A, Lau GK, Sarin SK; APASL ACLF Research Consortium (AARC) for APASL ACLF working Party. Dynamic assessments of hepatic encephalopathy and ammonia levels predict mortality in acute-on-chronic liver failure. *Hepatol Int*. 2021 Aug;15(4):970-982.
12. Verma N, Dhiman RK, Singh V, Duseja A, Taneja S, Choudhury A, Sharma MK, Eapen CE, Devarbhavi H, Al Mahtab M, Shukla A, Hamid SS, Jafri W, Butt AS, Ning Q, Chen T, Tan SS, Lesmana LA, Lesmana CRA, Sahu MK, Hu J, Lee GH, Sood A, Midha V, Goyal O, Ghazinian H, Kim DJ, Treeprasertsuk S, Mohan Prasad VG, Dokmeci AK, Sollano JD, Shah S, Payawal DA, Rao PN, Kulkarni A, Lau GK, Duan Z, Chen Y, Yokosuka O, Abbas Z, Karim F, Chowdhury D, Prasad AS, Sarin SK; APASL ACLF Working Party. Comparative accuracy of prognostic models for short-term mortality in acute-on-chronic liver failure patients: CAP-ACLF. *Hepatol Int*. 2021 Jun;15(3):753-765.
13. Rathi S, Duseja A, Thakur V, Ratho RK, Singh MP, Taneja S, Das A, Aggarwal R, Dhiman RK, Chawla YK. Chronic Hepatitis E With Genotype 1-Masquerading as Allograft Rejection After Liver Transplantation. *J Clin Exp Hepatol*. 2021 May-Jun;11(3):400-403.
14. Arora A, Kumar A, Prasad N, Duseja A, Acharya SK, Agarwal SK, Aggarwal R, Anand AC, Bhalla AK, Choudhary NS, Chawla YK, Dhiman RK, Dixit VK, Gopalakrishnan N, Gupta A, Hegde UN, Jasuja S, Jha V, Kher V, Kumar A, Madan K, Maiwall R, Mathur RP, Nayak SL, Pandey G, Pandey R, Puri P, Rai RR, Raju SB, Rana DS, Rao PN, Rathi M, Saraswat VA, Saxena S, Shalimar, Sharma P, Singh SP, Singal AK, Sooin AS, Taneja S, Varughese S. INASL-ISN Joint Position Statements on Management of Patients with Simultaneous Liver and Kidney Disease. *J Clin Exp Hepatol*. 2021 May-Jun;11(3):354-386.
15. Kalra N, Gupta P, Jugal T, Naik SS, Gorski U, Chaluvashetty SB, Bhujade H, Duseja A, Singh V, Dhiman RK, Sandhu MS. Percutaneous Cryoablation of Liver Tumors: Initial Experience from a Tertiary Care Center in India. *J Clin Exp Hepatol*. 2021 May-Jun;11(3):305-311.
16. Roy A, Premkumar M, Mishra S, Mehtani R, Suri V, Aggarwal N, Singh S, Dhiman RK. Role of ursodeoxycholic acid on maternal serum bile acids and perinatal outcomes in intrahepatic cholestasis of pregnancy. *Eur J Gastroenterol Hepatol*. 2021 Apr 1;33(4):571-576.
17. Taneja S, Duseja A, Mehta M, De A, Verma N, Premkumar M, Dhiman RK, Singh V, Singh MP, Ratho RK, Ramchandran R, Kumar V, Kohli HS. Sofosbuvir and Velpatasvir combination is safe and effective in treating chronic hepatitis C in end-stage renal disease on maintenance haemodialysis. *Liver Int*. 2021 Apr;41(4):705-709.
18. Ragate DC, Taneja S, Roy A, Duseja AK, Dhiman RK, Singh V. Idiopathic Hypercalcemia in Decompensated Cirrhosis: Reexploring an Entity in Oblivion. *J Clin Exp Hepatol*. 2021 Mar-Apr;11(2):270-272.

19. Duseja A, Dhiman RK, Premkumar M. Nonalcoholic Fatty Liver Disease: Lessons Learnt in the Last Five Years. *J Clin Exp Hepatol*. 2021 Mar-Apr;11(2):159-162.
20. Chugh Y, Premkumar M, Grover GS, Dhiman RK, Teerawattananon Y, Prinja S. Cost-effectiveness and budget impact analysis of facility-based screening and treatment of hepatitis C in Punjab state of India. *BMJ Open*. 2021 Feb 15;11(2):e042280.
21. Dhiman RK, Premkumar M. Hepatitis C Virus Elimination by 2030: Conquering Mount Improbable. *Clin Liver Dis (Hoboken)*. 2021 Jan 13;16(6):254-261.
22. Puri P, Dhiman RK, Taneja S, Tandon P, Merli M, Anand AC, Arora A, Acharya SK, Benjamin J, Chawla YK, Dadhich S, Duseja A, Eapan CE, Goel A, Kalra N, Kapoor D, Kumar A, Madan K, Nagral A, Pandey G, Rao PN, Saigal S, Saraf N, Saraswat VA, Saraya A, Sarin SK, Sharma P, Shalimar, Shukla A, Sidhu SS, Singh N, Singh SP, Srivastava A, Wadhawan M. Nutrition in Chronic Liver Disease: Consensus Statement of the Indian National Association for Study of the Liver. *J Clin Exp Hepatol*. 2021 Jan-Feb;11(1):97-143.
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24. Duseja A, De A, Taneja S, Choudhury AK, Devarbhavi H, Hu J, Hamid SS, Butt AS, Jafri SMW, Ghazinian H, Chawla YK, Dhiman RK, Duan Z, Chen Y, Tan SS, Lee GH, Lim SG, Kim DJ, Sahu M, Sollano JD, Carpio G, Mohan Prasad VG, Abbas Z, Lesmana LA, Lesmana CR, Eapen CE, Goel A, Sood A, Midha V, Goyal O, Dokmeci AK, Ning Q, Chen T, Ma K, Payawal DA, Lau GKK, Al Mahtab M, Rahman S, Alam MS, Shukla A, Shrestha A, Shah S, Kalal CR, Kumar G, Jain P, Paulson I, Sarin SK; APASL ACLF Working Party, APASL ACLF Research Consortium (AARC). Impact of metabolic risk factors on the severity and outcome of patients with alcohol-associated acute-on-chronic liver failure. *Liver Int*. 2021 Jan;41(1):150-157.
25. Singh S, Roy A. Tolvaptan for difficult- to -treat ascites: Difficulties in opening doors for GWAS application. *Liver Int*. 2021 Dec;41(12):3033.

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



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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

Awards and Recognitions

Mandakini Pradhan

- Awarded First Prize in Free Paper: Miscellaneous Group on “Acceptability and factors affecting cell free fetal DNA testing” by Dr Indrani Ghosh (PDCC) at Abhigyaan National Conference held on 26th to 28th Feb 2021.
- Chairperson: FOGSI Genetics and Fetal Medicine Committee FOGSI
- Fellowship of Indian College of Obstetrics and Gynaecology (FICOG)
- Vice president: Fetal Medicine Society of India UP Chapter

Amrit Gupta

- Awarded the annual membership of British Society for Endocrinology
- Elected as Vice President Association of Gynae-oncologists of India for tenure of 2 years (2019-2021)
- Executive member of Indian Menopausal Society of India (2018-2021)
- Treasurer Indian Menopausal Society of India (2021-2023)
- Executive member UPSC-AGOI (2019-2021)
- City Representative of UPSC-AGOI (2021-2023)

Indulata

- Institute of Scholars (InSc) Research Excellence Award 2021
- Appreciation Award by Indian Medical Association Lucknow on Doctor’s Day 1st July 2021
- Executive member of Reproductive Health committee, LOGS, FOGSI 2021

Sangeeta Yadav

- Fellowship of Indian College of Obstetrics and Gynaecology (FICOG)

Neeta Singh

- Fellowship of Indian College of Obstetrics and Gynaecology (FICOG)



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Invited sessions and chairpersons/lectures for Conferences:

Mandakini Pradhan

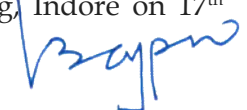
- 17th Jan 2021: Congenital cardiac diseases: maternal effect: FOGSI's First web conference on Cardio Obstetrics: speaker
- 27th January 2021: Role of Folate to prevent Birth defect: ISOPARB Mumbai Chapter: Speaker
- 6th February: NCD in OBGYN: FOGSI ICOG conference: Chairperson and speaker
- 14th February: Healthy Fetus: POGS Fetal Medicine: Speaker
- 16th February 2021: Rh alloimmunization: CONNECT Panel discussion by Dr Archana Verma: Panelist
- 17th February 2021: CME on Perinatology: Genetics of Fetal Loss: Bengal O&G Society and FOGSI Genetics and Fetal Medicine Committee: Organizer and speaker
- 25th February 2021: Genetics causes of malformation: Fetal Medicine Foundation India and FOGSI: Faculty and Mentor
- 5th March 2021: Challenging case scenario with experts: Genetics and First trimester by FOGSI and SFM and ISPAT Collaboration: Panelist
- 13th March 2021: Fundamental Dictums in the era of Genomics: Clinical Genetics for Obstetrician and Gynecologist by IRM conference by Madras Medical Mission
- 2nd April 2021: Fetal shunt and Embolisation: North Zone Yuva FOGSI:
- 3rd April 2021: Aneuploidy screening: North Zone Yuva FOGSI: Panel Moderator
- 9th April 2021: Antenatal Intervention: Diagnostic and Therapeutic: 36th ISOPARB National Conference: Speaker
- 10th April 2021: Fetal Anemia: Diagnosis and management: World Congress of Anemia:
- 11th April 2021: Early Diagnosis of Genetics and Structural abnormalities: 49th Annual Conference MOGS

Amrit Gupta

- 24th April 2021: National Scenario PPTCT, speaker Logs meeting with HIV and AIDS committee in LOGS
- 27th Sept 2021: Role of COC in Heavy Menstrual bleeding, Speaker, Webinar
- 12th Nov 2021: Prevalence of HPV in north India, Poster presentation, AGOICON 2021
- 11th Dec 2021: Poster presentation, Research day in SGPGIMS

Indulata

- Presented Poster on my intramural project To study the biomarker Glycosylated Fibronectin as a predictor of gestational diabetes in first trimester in north Indian population: A pilot study on the Research Day (IInd) on 13th Dec 2021 organized by Research Cell, SGPGIMS.
- As speaker on Genital Tuberculosis on Tuberculosis Day by Dept of GH, SGPGIMS, Lucknow in collaboration with Lucknow Pediatric Association (LAP)" on 24th March 2021.
- As speaker in Virtual National Webinar on the theme "Safe Maternal & Newborn Care" on the topic "Measure to prevent avoidable risk and harm to women and Newborns during Childbirth organized by CAHO Central zone at Bombay Hospital College of Nursing, Indore on 17th August 2021.



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Sangeeta Yadav:

- Panelist in Session on “Singleton Pregnancy and Aneuploidy” organized by Society of Fetal Medicine, UP Chapter on 11th August, 2021
- Speaker “Interesting Case Scenarios” in Genetics: Laboratory to bedside organized by Fetal Medicine and Genetics Committee, FOGSI in association with Varanasi Obstetrics and Gynecology Society on 28th August, 2021
- Moderated panel on “Fetal Congenital abnormalities: Role of Obstetrician” organized by Fetal Medicine and Genetics Committee, FOGSI in association with Karnataka State Obstetrics and Gynecology Association on 3rd September 2021
- Moderated panel on “Congenital Malformations: What next” organized by Jaipur and Kota Obstetrics and Gynecology Society on 12th September, 2021
- Moderated panel on “Fetal Malformations: A Team Approach” organized by Fetal Medicine and Genetics Committee, FOGSI in association with Lucknow Obstetrics and Gynecology Society on 16th October, 2021

Neeta Singh:

- ‘Management of High-Risk Pregnancy’ organised by Society of Maternal Fetal Medicine and Varanasi Obstetrics and Gynaecology Society, May 2021: Panelist
- Guest lecture on ‘Congenital malformation: Genetic Perspective’ in CME on GENETICS & FETAL MEDICINE by Bhagalpur Obstetrics and Gynaecology Society in association with FOGSI Genetics and Fetal Medicine Committee on 26th August 2021
- Guest lecture on ‘Thalassemia: Screening and Prevention’ in CME on GENETICS & FETAL MEDICINE by Varanasi Obstetrics and Gynaecology Society in association with FOGSI Genetics and Fetal Medicine Committee on 25th August 2021
- Guest lecture on ‘Role of progesterone in preterm labor’ Organised by Varanasi Obstetrics and Gynaecology Society, 9th September 2021
- Moderated Panel on ‘Committee Congenital Malformation: What an Obstetrician should know’ organised by Jaipur and Kota Obstetrics and Gynaecology Society in association with FOGSI Genetics and Fetal Medicine, 12th September 2021
- Moderated Panel on ‘Committee Congenital Malformation: What an Obstetrician should know’ organised by Karnataka Obstetrics and Gynaecology Society in association with FOGSI Genetics and Fetal Medicine, 24th September 2021
- Guest lecture on ‘Rh D Negative Pregnancy’ organised by MILAN - FOGSI NNF Perinatal Meetings, 10th October 2021
- Moderated Panel on ‘Congenital Malformations: A team approach’ organised by Lucknow Obstetrics and Gynaecology Society in association with FOGSI Genetics and Fetal Medicine Committee, 16th October 2021
- Chaired a session on ‘Fetal Medicine: Newer Frontiers’ in Fetal Medicine workshop in 6th APCOG 2021, 13th November 2021
- Chaired a session on ‘Spot the diagnosis – Congenital anomalies & Genetic soft marker video session’ at ISOPARB Midterm 2021, Gorakhpur, November 4, 2021



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Membership of Societies

(Membership of professional bodies funded by Institute)

Dr Mandakini Pradhan

- Lucknow Obstetric+s and Gynaecology Society

Dr Amrit Gupta

- Lucknow Obstetrics and Gynaecology Society

Dr Sangeeta Yadav

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

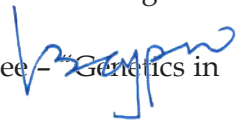
Dr Neeta Singh

- Lucknow Obstetrics and Gynaecology Society
- Society of Fetal Medicine

Teaching Workshops/ CME's organized 2021

Mandakini Pradhan

- FOGSI FETUS DAY on 31st October as organising secretary
- Organised Webinar Series- "From Laboratory to Bed Side: a series of 7 webinars" with FOGSI Genetics and Fetal Medicine Committee:6th October 2021: Chair: Dr Shantha Kumari
- Basic Genetics: Chromosome, it's testing and diseases:Dr Hema Purandarey
- Single gene disorder or Mendelian disorders: Dr Shagun Aggarwal 21st October 2021: Chair: Dr Alpesh Gandhi
- Clinical Genetics Family history & Pedigree analysis: Dr Vasundara Tamankar
- Pre-conceptional and Prenatal counselling: Dr. Preetha Tilak 28th October 2021: Chair: Dr Archana Verma
- Disease specific Genetics: Dysmorphology and Synd diagnosis: Dr K Mandal
- Cancer Genetics esp breast, ovarian and familial cancer: Dr Rajiv Sarin
- 11th November 2021: Chair: Dr Fessy Louis T
- Reproductive Genetics: Non-Invasive Prenatal Testing: Dr Priya Kadam
- Genetics of infertility: Dr Meenakshi Lallar 18th November 2021: Chair: Dr Basab Mukherjee
- Laboratory genetics- test ordering and interpretation Part 1Cytogeneticetechniques- Karyotype, FISH: Dr Hema Purandarey
- MLPA, QF PCR: Dr Pragya Ranganath 25th November 2021: Chair: Dr Sanjay Gupte
- Laboratory genetics- test ordering and interpretation Part 2:
- Microarray: Dr V Kamath and Molecular genetics- PCR, Sanger sequencing,
- Next generation sequencing: Dr Parag 2nd December 2021: Chair: Dr Usha Sharma
- Biochemistry: Inborn error of Metabolism (IEM) in Newborn: Dr Shalini Test ordering and Interpretation for IEM: Dr Sunita Bijarnia
- Organised Webinar Series with FOGSI Genetics and Fetal Medicine Committee - "Genetics in my Daily Life (3 series)"



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- 14th Dec 2021: Genetics in infertility: Dr N Melhotra & Screening for AR Dr Shagun
- 16th Dec 2021: NIPT: Dr K Ghosh and Screening Autosomal Dom: Dr Manisha Madhei
- 18th Dec 2021: Screening for pre-eclampsia: Dr Lakshmy Ravi Selvaraj
- And Carrier for X-linked disorder: Dr M Pradeep Kumar
- 17th February 2021: Bengal O&G Society and FOGSI Genetics and Fetal Medicine Committee: CME on Perinatology: Genetics of Fetal Loss
- 26th February 2021: FOGSI, FIGO, SAFOG and BSOG: ABHIGYAN: Fetal Surveillance workshop
- 21st August 2021: Jabalpur Society of OBGY: Fetal Medicine
- 24th August 2021: Dehradun society of OBGY: Prevention of Autosomal recessive disorder
- 26th August 2021: Bhagalpur, Katihar, Purnia and Saharsa Society: Genetics and Fetal Medicine
- 3rd Sept 2021: KSOGA: Genetics and Fetal Medicine
- 4th Sept 2021: Cuttack Society of OBGY: Hydrops Fetalis
- 12th Sept 2021: Jaipur and Kota Society: Congenital malformation

Amrit Gupta

- UP state chapter AGOI, CME SGPGIMS
- Foundation day Celebrations of department of SGPGIMS: organizing Secretary

Indulata

- Organized online Breast Feeding Awareness Program on 7th August 2021 SGPGIMS, Lucknow.

Sangeeta Yadav

- Organized webinar as Member of Fetal Medicine and Genetics Committee, FOGSI in association with Varanasi Obstetrics and Gynecology Society on Genetics: Laboratory to bedside on 28th August, 2021

Neeta Singh

- Organised CME on 'Clinical genetics: What Obstetricians should know.' Under Aegis of Lucknow Obstetrics and Gynaecology Society and Genetics and Fetal Medicine Committee of FOGSI on 16th October 2021

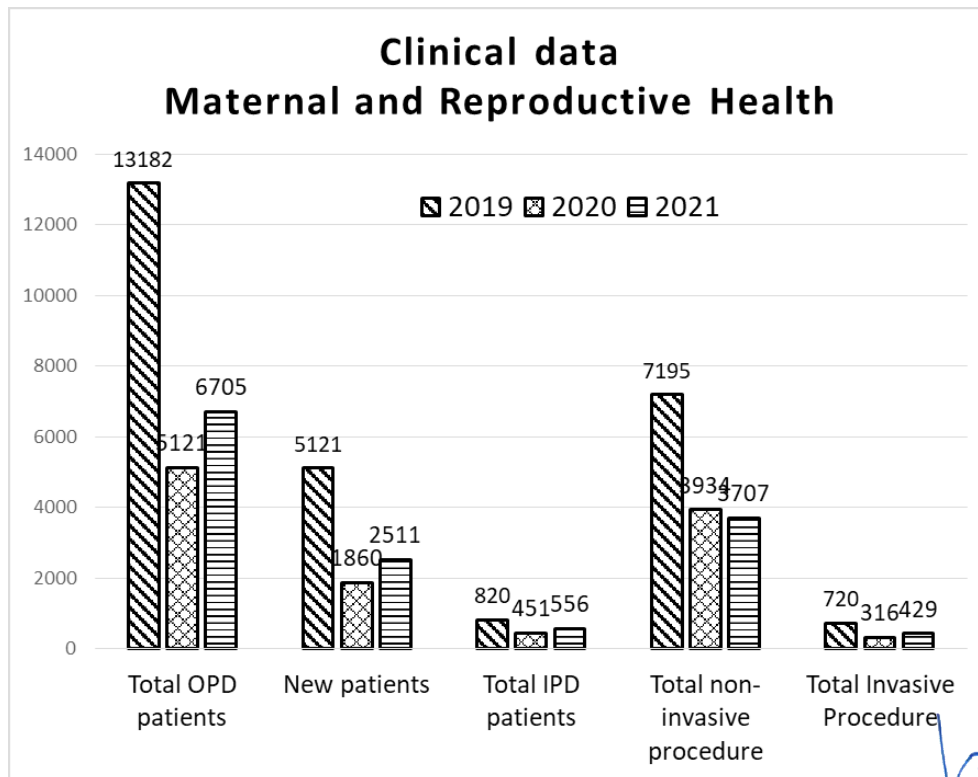
Service

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

S.No	Parameters	2019	2020	2021
1	Number of New patients in OPD	5121	1860	2511
2	Number of Old/ Follow-up patients in OPD	8061	3261	4194
3	Total patients in OPD	13182	5121	6705
4	Total number of patients admitted (IPD)	820	451	556
5	Total number of Intervention			
	• Normal Delivery	48	36	41
	• Operative delivery	389	265	272

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	• Termination of Pregnancy	42	15	33
	• Other operation (ectopic pregnancy, Caesarian hysterectomy and laparotomy)			
6	Total number of Prenatal noninvasive& invasive diagnostic Procedures done	7751	4166	4042
	• Non-invasive Ultrasound	7195	3934	3707
	• Total Invasive diagnostic procedure	556	232	335
	Amniocentesis	514	213	293
	Chorionic villous sampling	31	12	34
	Cordocentesis	11	7	8
7	Total number of prenatal therapeutic procedures done	164	84	94
	• Intrauterine transfusion	124	63	64
	• Multifetal pregnancy reduction	30	17	25
	• Selective fetal reduction	6	2	2
	• Fetal shunt, amnioinfusion, amnioreduction, placental embolization etc	4	2	3
8	Total invasive fetal procedures done	720	316	429




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Training

PDCC: 4

Research projects

Completed:

1. Serum Bile Acid Levels in Women With Intrahepatic Cholestasis of Pregnancy in India Funding: Departmental (PI: Sangeeta Yadav), Status: Published in Journal Of Clinical And Experimental Hepatology in 2021. Pregnant women with intrahepatic cholestasis of pregnancy were included. Of the 3735 pregnant women screened, 105 (2.8%) had ICP. Median (interquartile range) serum bile acid levels in nonpregnant women (n = 61; 28 [25–31] years) and pregnant women without ICP (n = 59; 28 [25–31] years) were similar (3.7 [1.6–5.1] mmol/L and 3.7 [2.2–5.8] mmol/L, respectively). By comparison, serum bile acid level in women with ICP (n = 105; 28 [26–32] years) was significantly higher (20.2 [12.7–39.5] mmol/L; P < 0.05 each), being above 10 mmol/L in 88 (83.8%). The optimum cut-off for the diagnosis of ICP in our population was >8.6 mmol/L, with sensitivity of 87.6%, specificity of 93.3%. Conclusion: Serum BA levels in healthy Indian nonpregnant and pregnant women are similar to those in other populations and can be used to diagnose ICP with an optimal cut-off being 8.6 mmol/L.
2. Maternal and Fetal Outcomes of Pregnancy in Patients with Immune Thrombocytopenia **Funding:** Departmental (PI: Mandakini Pradhan), **Status:** Published in Journal of Obstetrics and Gynaecology. Twenty-nine pregnancies in 27 ITP patients were studied. The mean baseline platelet count was $0.18 \pm 0.05 \times 10^9/L$. Twenty-seven (93.1%) cases were treated with oral prednisolone. Twenty deliveries (69.0%) were vaginal and 9 (31.0%) deliveries were by cesarean section. There were no major bleeding episodes during pregnancy or delivery. The mean neonatal platelet count was $1.23 \pm 0.58 \times 10^9/L$ at birth. Neonatal ITP was seen in 3 (3.5%) neonates. No bleeds or intracranial hemorrhages were observed. Only maternal platelet count < $50 \times 10^9/L$ at delivery showed a statistical correlation with NAITP (p=0.022). There was no positive correlation between NAITP and the duration of maternal ITP, the timing of ITP onset, or type of treatment.

Research in progress

Funding agency, Name of project, Investigators

1. SGPGIMS: Study the effect of HPV infection on pregnancy outcome. Dr Amrit Gupta
2. SGPGI: To study the biomarker Glycosylated Fibronectin as a predictor of gestational diabetes in first trimester in north Indian population: A pilot study. Dr Indulata
3. DBT: Monitoring placental health and function across pregnancy using nanovesicles. as Co-PI Dr Indulata

Publications

1. Yadav S, Singh N, Pradhan M. Evaluation and Management of chronic Hypertension in Pregnancy. Arch Obstet Gynecol. 2021; 2(1): 9-15
2. Rajesh Kashyap, Akansha Garg, Mandakini Pradhan. Maternal and Fetal Outcomes of Pregnancy in patients with Immune Thrombocytopenia. J ObstetGynaecol India. 2021,71(2):124-130.
3. 3. Lata I, Mandelia A, Mandal K. Successful Antenatal Diagnosis and Management of a Rare Case of Congenital Fetal Choledochal Cyst. Maternal Fetal Med 2021;3(3):225–228.


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4. Mandakini Pradhan, Ratna Biswas, Neeta Singh. Prenatal Diagnosis. In: Shubha Sagar Trivedi, Manju Puri, Swati Agrawal, editors. Management of High-Risk Pregnancy-a practical approach. 3rd ed. India: Jaypee Brothers Medical Publishers (P) Ltd.; 2021. p.10-24.
5. Pradhan Mandakini, Singh Neeta. Role of MRI in Pregnancy. In: Agarwal Meenu, Palshetkar Rohan, Palshetkar Nandita, Umarji Chinmay, editors. FOGSI Focus Imaging in Obstetrics and Gynecology [e-book]. India: Jaypee Brothers Medical Publishers (P) Ltd.; 2021 [cited 2021 Jan 1]: 56-57. Available from: https://doi.org/10.5005/jp/books/18423_21.
6. Amrit Gupta, Varuna Verma, Indrani Ghosh et al.; Dilemmas in management of pregnant patients with mechanical Prosthetic valves in rural and semi-urban north Indian population at a tertiary care institution. 2021 International journal of scientific Research, 2021; 9 (12): 44-45
7. Amrit Gupta, Shuchi Rani, Kalika Dubey; Effect of Human Papilloma Virus (HPV) infection during pregnancy on maternal and fetal outcome; International Journal of Recent Scientific Research; 2021, 12 (7): 42300-42303
8. Avani Pradhan, Kamlesh Choure, Amrit Gupta. Hypothyroid prevalence during pregnancy in last one decade in India; International journal of Scientific Research; 2021; 10(8): 48-54.
9. Arshiya Parveen, Suman Mishra, Medha Srivastava, Dharmendra K Chaudhary, Deepa Kapoor, Amrit Gupta, Swasti Tiwari; Circulating Placental Alkaline Phosphatase Expressing Exosomes in Maternal Blood Showed Temporal Regulation of Placental Genes; 2021, Frontiers in Medicine 8, 2718.
10. Khanna R, Chandra D, Yadav S, Sahu A, Singh N, Kumar S, et al. Maternal and fetal outcomes in pregnant females with rheumatic heart disease. Indian heart journal. 2021;73(2):185-9.
11. Khanna R, Chandra D, Yadav S, Sahu A, Singh N, Kumar S, Garg N, Tewari S, Kapoor A, Pradhan M, Goel PK. Maternal and fetal outcomes in pregnant females with rheumatic heart disease. Indian heart journal. 2021 Mar 1;73(2):185-9.
12. Amrit Gupta, Kalika Dubey, Manasi Gupta; Outcome of scrub typhus in pregnancy during covid -19 pandemic: a case report; Journal of Family Medicine and Primary Care, 2021;10 (7): 2709.

Visiting Professors: None

Departmental Highlights

The department focused on preventive aspects of diseases during pregnancy and encourage healthy practices. Screening for high-risk women for developing hypertension during pregnancy, preterm delivery and preventing neural tube defects, thalassemia major in fetus. Necessary preventive measures were taken. The knowledge was shared at different platform all across India to make other gynecologist aware and do practice. The department established itself as a knowledge hub for prenatal diseases.

New Initiatives

To start Fellowship in Maternal and Fetal Medicine under National Board of Examination.



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DEPARTMENT OF MEDICAL GENETICS

STAFF

Name of Faculty Members:

1. Shubha R Phadke, MD, DM	Professor and Head
2. Sarita Agarwal, Ph.D.	Professor (Date of retirement: 31-01-2021)
3. Kausik Mandal, MD, DM	Additional Professor
4. Deepti Saxena, MS, DM	Associate Professor
5. Amita Moirangthem, MD, DM	Associate Professor
6. Anshika Srivastava, MSc, Ph.D.	Assistant Professor

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

- IAP Annual Conference, 6th Feb 2021
- IAN Fundamental Course: Medical Genetics, 28th May 2021 [virtual platform]
- 'The will and the way to reach the unreached: our experience with newborn screening' - 12th May 2021 [virtual platform]
- Panel discussion organized by Society of Fetal Medicine - 22nd Sept 2021 [virtual platform]
- SGPGIMS Alumni meet - 13th Dec 2021

Dr Kausik Mandal

- Hemophilia Awareness Program Jan 2021
- LSD: Awareness program
- SIAMG: March 2021
- Genomics for Practising Clinicians, Bangladesh
- SFM, Kolkata
- Expert Committee SMA: March 2021
- Railway physicians society
- ICMR-NIRRH, Mumbai
- MAMC New Delhi: Teaching session
- LSD awareness
- Hematology: Orissa
- FOGSI: National conference
- LSD awareness
- Nephrogenetics: National series
- Neuro Pedicon: Kolkata



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- SFM: National
- IAP Kolkata

Dr. Deepti Saxena

- Panel discussion on “Multicystic dysplastic kidneys and Hydronephrosis” in Webinar on Genitourinary tract: Anomalies, Presentation, Genetics and Management organized by Society of fetal medicine - 18 March, 2021 [virtual platform]
- Panel discussion on “Congenital Diaphragmatic hernia and Miscellaneous thoracic lesions” in Webinar on Genetics of Fetal thoracic anomalies organized by Society of fetal medicine - 15 April, 2021 [virtual platform]
- Common fetal disorders – how to prevent, International health Summit organized by Youth News - 19 June, 2021 [virtual platform]
- Training Course on Medical Genetics at Genetic Research Centre, ICMR- National Institute for Research in Reproductive Health, Mumbai - 5th to 30th July, 2021 [virtual platform]
- Panel discussion in Mid Term Hybrid ISOPARB national conference on “Prevention of Stillbirth” organized by Gorakhpur Chapter of ISOPARB and Gorakhpur Obstetrics and Gynaecology Society, 13-14 November, 2021 [virtual platform]

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

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

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 Gynecology

Dr. Anshika Srivastava

- Member of American Society of Human Genetics

CMEs organized: Nil

Service

S. No.	Parameters	2019	2020	2021
1	Total number of patients in OPD	14015	1804	5579
2	Total number of patients admitted (IPD)	8589	3135	2250
3	Total number of antenatal ultrasounds done	2085	694	683
4	Total number of antenatal invasive procedures done	563	219	232
5	Total number of laboratory tests done	10822	4804	5577
	• Sanger sequencing	913	402	620
	• Multiplex Ligation Probe Amplification	1216	408	752

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• Cytogenetic microarray	71	35	80
• Karyotype	2081	588	1033
• Biochemical enzyme	298	113	265
• Quantitative Fluorescent Polymerase chain reaction	546	208	227
• Beta thalassemia screening	5697	3050	2600

Training

1. At present, there are 7 senior residents (6 enrolled in DM course and 1 in PDCC, Molecular genomics and genetics). 8 students are enrolled in Ph. D program. There are also 2 fellows under DBT and 1 under Genzyme fellowship.
2. Number of students passed in final year examination (DM): 2

Research projects

Completed:

1. To study the phenotypic spectrum of a cohort of patients with Parry Romberg syndrome and to identify the copy - number variations by cytogenetic microarray. 2018-2021. Funding - SGPGI; Project Investigator: Dr. Deepti Saxena Status: Communicated for publication. Summary report-A total of 12 patients were included in the current study. The age at presentation ranged from 6- 30 years with mean being 16 years. Facial hemiatrophy was seen in 11 cases of which slight predominance of left side (6 cases) as compared to right side. In two cases, copy number variations inherited from unaffected parents were found. The current study did not show any variant causative of PRS.

Research in Progress

Funding agency, Name of project, Principal Investigator

- 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
- The Indian Movement Disorder Registry and Biobank: Clinical and Genetic Evaluation of Movement Disorders in Indian Patients, Dr S R Phadke
- Training of in-service Clinicians from Government Hospitals and Outreach Program for Aspirational Districts, Dr S R Phadke
- National registry for rare and other inherited disorders, Dr S R Phadke
- Shire Biotech India Pvt. Ltd.: A Post Marketing Surveillance (PMS) Study for VPRIV (Velaglucerase alfa) in India, Dr S R Phadke
- SERB: Study of Complexities of Genomic and Chromosomal Abnormalities in Couples and in Products of Conception from Recurrent Pregnancy Loss, Multicentric, Dr Kausik Mandal
- Extramural (Takeda): Phase IV clinical trial: Replagal for Fabry Disease, Dr Kausik Mandal
- Extramural (corporate): Genetic modifiers in Indian cohort of patients with Beta-Thalassemia, Dr Kausik Mandal

- 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
- ICMR: Indian Undiagnosed Diseases Program, Dr Amita Moirangthem
- DBT: Mission Program on Pediatric Rare Genetic Disorders, Dr Amita Moirangthem
- ICMR: Identification of genetic variants and their functional evaluation in the pathogenesis of inherited cardiomyopathies, Dr Anshika Srivastava
- DBT: Probing the dynamic balance of histone H2Aub1 regulatory axis in hypertrophic cardiomyopathy and early heart development, Dr Anshika Srivastava
- DBT: Functional characterization of rare founder alleles causing neurodevelopmental disorders for biomarker identification and community genetics surveillance, Dr Anshika Srivastava
- ICMR: Whole-exome sequencing based genetic testing and functional characterization of rare pathogenic alleles causing neurodevelopmental disorders for biomarker identification, Dr Anshika Srivastava
- 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

2. Agrawal N, Mandal K. Rare case of dual diagnosis in consanguineous family: a case report. *Clin Dysmorphol.* 2021 Jul 1;30(3):164-166. doi: 10.1097/MCD.0000000000000374.
3. Agrawal N, Phadke SR. Peters-Plus with Anal Atresia and a Novel Frameshift Mutation. *Indian J Pediatr.* 2021 Feb;88(2):184-185. doi: 10.1007/s12098-020-03416-7. Epub 2020 Jul 11. PMID: 32654102 No abstract available.
4. Agrawal N, Srivastava P, Phadke SR. Desbuquois dysplasia Kim variant: a rare case report syndrome. *Clin Dysmorphol.* 2021 Jan;30(1):62-65. doi: 10.1097/MCD.0000000000000356. PMID: 33136656 No abstract available.
5. Batra N, Kant R, Mandal K, Joshi K. A Rare Etiology of Hypocalcemic Seizures in Adulthood: Clues to Diagnosis from Facial Dysmorphism. *Neurol India.* 2021 Jan-Feb;69(1):161-163. doi: 10.4103/0028-3886.310108.
6. Deshpande D, Gupta SK, Sarma AS, Ranganath P, Jain SJMN, Sheth J, Mistri M, Gupta N, Kabra M, Phadke SR, Girisha KM, Dua Puri R, Aggarwal S, Datar C, Mandal K, Tilak P, Muranjan M, Bijarnia-Mahay S, Rama Devi A R, Tayade NB, Ranjan A, Dalal AB. Functional characterization of novel variants in SMPD1 in Indian patients with acid sphingomyelinase deficiency. *Hum Mutat.* 2021 Oct;42(10):1336-1350. doi: 10.1002/humu.24263. Epub 2021 Aug 3.
7. Kausthubham N, Shukla A, Gupta N, Bhavani GS, Kulshrestha S, Das Bhowmik A, Moirangthem A, Bijarnia-Mahay S, Kabra M, Puri RD, Mandal K, Verma IC, Bielas SL, Phadke SR, Dalal A, Girisha KM. A data set of variants derived from 1455 clinical and research exomes is efficient in variant prioritization for early-onset monogenic disorders in Indians. *Hum Mutat.* 2021 Apr;42(4):e15-e61. doi: 10.1002/humu.24172. Epub 2021 Mar 1. PMID: 33502066.
8. Masih S, Moirangthem A, Phadke SR. Homozygous Missense Variation in PNPLA8 Causes Prenatal-Onset Severe Neurodegeneration. *Mol Syndromol.* 2021 Jun;12(3):174-178. doi: 10.1159/000513524. Epub 2021 Mar 19. PMID: 34177434; PMCID: PMC8215966.
9. Masih S, Moirangthem A, Phadke SR. Twins with PEX7 related intellectual disability and cataract: Highlighting phenotypes of peroxisome biogenesis disorder 9B. *Am J Med Genet A.*

- 2021 May;185(5):1504-1508. doi: 10.1002/ajmg.a.62110. Epub 2021 Feb 14. PMID: 33586206.
10. Meckel Gruber and Joubert Syndrome Diagnosed Prenatally: Allelism between the Two Ciliopathies, Complexities of Mutation Types and Digenic Inheritance. *FetalPediatrPathol*. 2021 Nov 25:1-11. doi: 10.1080/15513815.2021.2007434.
 11. Moirangthem A, Mandal K, Saxena D, Srivastava P, Gambhir PS, Agrawal N, Shambhavi A, Nampoothiri S, Phadke SR. Genetic heterogeneity of disorders with overgrowth and intellectual disability: Experience from a center in North India. *Am J Med Genet A*. 2021 Aug;185(8):2345-2355. doi: 10.1002/ajmg.a.62241. Epub 2021 May 4. PMID: 33942996.
 12. Moirangthem A, Phadke SR. Novel FOXP1 pathogenic variants in two Indian subjects with syndromic intellectual disability. *Am J Med Genet A*. 2021 Apr;185(4):1324-1327. doi: 10.1002/ajmg.a.62083. Epub 2021 Jan 11. PMID: 33427368.
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 14. Narayanan DL, Tuteja M, McIntyre AD, Hegele RA, Calmels N, Obringer C, Laugel V, Mandal K, Phadke SR. Clinical and Mutation Spectra of Cockayne Syndrome in India. *Neurol India*. 2021 Mar-Apr;69(2):362-366. doi: 10.4103/0028-3886.314579.
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 16. Nilay M, Saxena D, Mandal K, Moirangthem A, Phadke SR. Novel pathogenic variants in an Indian cohort with epidermolysis bullosa: Expanding the genotypic spectrum. *Eur J Med Genet*. 2021 Dec;64(12):104345. doi: 10.1016/j.ejmg.2021.104345. Epub 2021 Sep 29. PMID: 34597860.
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 18. Phadke SR, Srivastava P, Sharma P, Rai A, Masih S. Homozygosity stretches around homozygous mutations in autosomal recessive disorders: patients from nonconsanguineous Indian families. *J Genet*. 2021;100:2. PMID: 33707353
 19. Rai A, Patil SJ, Srivastava P, Gaurishankar K, Phadke SR. Clinical and molecular characterization of four patients with Robinow syndrome from different families. *Am J Med Genet A*. 2021 Apr;185(4):1105-1112. doi: 10.1002/ajmg.a.62082. Epub 2021 Jan 26. PMID: 33496066
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 21. 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 ReprodInfertil*. 2021 Oct-Dec;22(4):302-306. doi: 10.18502/jri.v22i4.7657. PMID: 34987993 Free PMC article.
 22. Sait H, Srivastava P, Gupta N, Kabra M, Kapoor S, Ranganath P, Rungsung I, Mandal K, Saxena D, Dalal A, Roy A, Pabbati J, Phadke SR. Phenotypic and genotypic spectrum of CTSK variants in a cohort of twenty-five Indian patients with pycnodysostosis, *Eur J Med Genet*. 2021 Jul;64(7):104235. doi: 10.1016/j.ejmg.2021.104235. Epub 2021 May 1.

23. Sinha R, Sarkar S, Mandal K, Tse Y. Uptake of next-generation sequencing in children with end-stage renal disease secondary to focal segmental glomerulosclerosis and parental decision for kidney transplantation-Experience from a low resource setting: A Retrospective Cohort Study. *Pediatr Transplant*. 2021 Aug;25(5):e13960. doi: 10.1111/petr.13960. Epub 2020 Dec 26.
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27. 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.
28. Varshney K, Narayanachar SG, Girisha KM, Bhavani GS, Narayanan D, Phadke S, Nampootheri S, Udipi GA, Raghupathy P, Nair M, Geetha TS, Bhat M. Clinical, radiological and molecular studies in 24 individuals with Dyggve-Melchior-Clausen dysplasia and Smith-McCort dysplasia from India. *J Med Genet*. 2022 Apr 27:jmedgenet-2021-108098. doi: 10.1136/jmedgenet-2021-108098. Online ahead of print. PMID: 35477554
29. Vishwakarma P, Agarwal S, Dean DD, Muthuswamy S, Mandal K. Molecular spectrum, family screening and genetic counselling of Spinocerebellar Ataxia (SCA) cases in an Indian scenario. *J Neurogenet*. 2021 Sep-Dec;35(4):370-380. doi: 10.1080/01677063.2021.1940172. Epub 2021 Jun 23. [Original source: <https://studycrumb.com/alphabetizer>]

Visiting Professors: Nil

Departmental Highlights

1. The department has been in the news for the various events organized by the department for patient welfare and awareness for rare diseases (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. 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.



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DEPARTMENT OF MICROBIOLOGY

STAFF

Name of 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

Awards and Honours:

1. Excellence award for service during COVID-19 pandemic
The department received center for excellence award for doing exemplary service and testing of COVID-19 from Minister of Medical Education, Government of Uttar Pradesh. The department has conducted around 33 lakhs COVID-19 tests from institute as well as other districts of Uttar Pradesh.
2. Secretary of Association of Medical Microbiologists (UP-UK Chapter IAMM); 2021-2023 (Dr. Rungmei S K Marak)
3. Vice Chairperson (Dr. Richa Mishra) of Operational Research State Task Force (OR-STF) for Tuberculosis in entire state of Uttar Pradesh
4. Best poster. Cytomegalovirus reactivation in an immune-competent, critically ill ARDS patients, UP-UK MICROCON 2020 held at SRMS, Bareilly on 07.02.2021.
5. Best Poster. Evaluation of seven commercial RT-PCR kits for COVID-19 testing in pooled clinical specimens. UP-UK MICROCON 2021 held at AIIMS Rishikesh on 22.03.2021
6. Best Poster. A study on clinical profile and susceptibility patterns of Elizabethkingia species from a tertiary care institute of North India. UP-UK Microcon 2021.
7. Best Oral paper, Dr. Rungmei S K Marak, XVII National Conference of the Hospital Infection Society India (HISI), hosted by the HISI-Aligarh Chapter (HISICON 2021) 29th- 31st July, 2021.
8. Best Poster paper. XVII National Conference of the Hospital Infection Society India (HISI), hosted by the HISI-Aligarh Chapter (HISICON 2021) 29th-31st July, 2021
9. Prof Ayyagari Award for best oral paper with gold medal (UP-UK Microcon 2021). Singh S, Sahu C, Patel SS, Ghoshal U. A study on clinical profile and susceptibility patterns of Elizabethkingia species from a tertiary care institute of North India.
10. IAMM, Dr S.S. Kelkar Memorial prize 2021 for the best poster in Medical Microbiology in MICROCON 2021.
11. As an invited delegate (Dr. Richa Mishra) at the Zonal Task Force (ZTF) workshop held at Dayanand Medical College & Hospital, Ludhiana.
12. Invited delegate (Dr. Richa Mishra) in the State Task Force (STF) Workshop (2021-22) of North Zone Operational Research in Tuberculosis held in December 2021.

Members of International Societies

Dr. Ujjala Ghoshal

- European Society of Clinical Microbiology & Infectious Diseases in 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 (LM 805\ 98)
- Hospital infection society of India (L-1043)
- Life member of Indian Society of Pathology and Microbiology (LM 1642\99)
- Life member of Indian Society of Gastroenterology (LM 001475)
- Life member of Indian Society of Parasitology (LM-709)
- Life member of Indian Society of Tropical Parasitology-LM-35
- Life member of AIDS Society of India (ASICON)-LM-400
- Founder & Life member of UP Chapter Of Indian Society of Tropical Parasitology LM-001

Dr. Rungmei S K Marak

- Secretary of Association of Medical Microbiologists (UP-UK Chapter IAMM); 2021-2023
- Member, Executive Council, Hemwati Nandan Bahuguna Uttarakhand Medical Education University, Dehradun (2019-2021)
- 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



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Dr. Sangram Singh Patel

- Life member of Indian Association of Medical Microbiologists

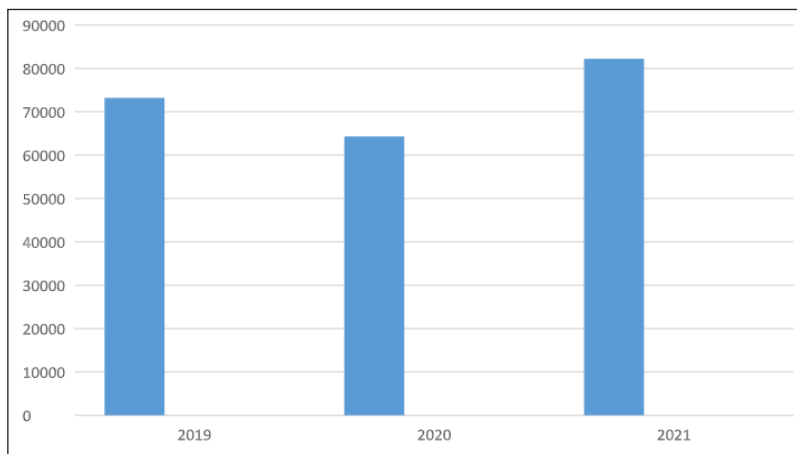
CME/Workshop organized

1. CME on “Antimicrobial Susceptibility testing in the era of Multi Drug Resistant organisms” on 15/07/2021 in collaboration with Pfizer.
2. CME on “Combat MRSA” on 16/08/2021 in collaboration with Wockhardt.
3. Organizing Secretary (Dr. Richa Mishra) of the Tuberculosis Nutrition Program: Adoption of children affected with TB for treatment and nutritional monitoring, held on 22-03-2021 on occasion of World TB Day.

Service:

Samples received and tested in the department

Year	Samples Processed
2019	68234
2020	64305
2021	82223



Clinical Services

Bacteriology Laboratory

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 2
4. Procalcitonin assay for management of sepsis
5. Test for Scrub typhus IgM
6. Antibiotic sensitivity testing (routine and automated sensitivity testing)
7. Rapid bacterial diagnosis by advanced diagnostic technique like MALDI-TOF MS



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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-parasities like Malaria and Filariasis, Leishmania etc
5. Antigen detection tests for haemo-parasities like Plasmodium Vivax and falciparum and Wucheria bancrofti (Filariasis) 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
 - Herpes Simplex,
 - Dengue,
 - Chikungunya,
 - Japanese Encephalitis
 - E B Virus,
 - Toxoplasma IgG avidity testing etc

Virology

1. COVID 19: RTPCR, Truant, Antigen detection and serological testing.
2. RTPCR for
 - Dengue
 - Herpes Simplex,



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- 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 MS
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 Ph.D. students are undergoing training

Research Completed in the Year

1. A study on the prevalence, risk factors and molecular characterization of Clostridium difficile in patients with inflammatory bowel disease, 2018-2021: 4 Lakh: SGPGI.
2. Phenotypic and Genotypic Characterization of Fosfomycin Resistance in bacterial isolates from Patients with Urinary Tract Infection: 3 lakh (2018-2020): SGPGI.
3. Detection of Gut Colonization by Carbapenemase Producing Gram Negative Bacteria and their Molecular Characterization: 5 lakhs (2018-2020): SGPGI
4. Comparison of the Diagnostic Performance of the Xpert MTB/RIF Assay with the Geno Type MTBDR plus Version 2 Line Probe Assay for detection of Rifampin-resistant Mycobacterium tuberculosis

Research in progress

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. 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).
4. Understanding the role of gut microbiome associated immuno-metabolomic modulations in patho-physiology of autoimmune hepatitis. 67 lakhs: DHR (technically approved).

5. Antimicrobial susceptibility testing and molecular characterization of Minocycline and Omadacycline resistance: 5 lakhs (2021-2023): SGPGI.
6. Cytomegalovirus reactivation in critically ill immunocompetent patients with septic shock: 2022: 500000: SGPGI.
7. 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.
8. Establishing Molecular Line probe assay laboratory in New Diagnostic Block at Department of Microbiology, SGPGIMS (Budget Rs. 16 lacs)

Publications:

1. Aathira Ravindranath, Gautham Pai, Moinak Sen Sarma, Anshu Srivastava, Richa Lal, Vinita Agrawal, Rungmei S K Marak, Surender Kumar Yachha, Ujjal Poddar, Pallavi Prasad. Gastrointestinal Basidiobolomycosis: A Mimic of Lymphoma. *J Pediatr.* 2021; 228:306-
2. Garg A, Garg J. Evaluation of Coronavirus Disease 2019 (COVID-19) RT-qPCR Tests in Multi-sample Pools. *Clinical Infectious Diseases.* 2021 May 1;72(9): e434-35.
3. Garg A, Ghoshal U, Patel SS, Singh DV, Arya AK, Vasanth S, Pandey A, Srivastava N. Evaluation of seven commercial RT-PCR kits for COVID-19 testing in pooled clinical specimens. *Journal of Medical Virology.* 2020. doi/10.1002/jmv.26691.
4. Garg A, Ghoshal U, Patel, Sangram S, Singh DV, Arya A K, Vasanth S, Pandey A, Srivastava N; Evaluation of seven commercial RT-PCR kits for COVID-19 testing in pooled clinical specimens; *Journal of Medical Virology*, 93,2281-2286,2021.
5. Garg J, Garg A. Evaluation of SARS CoV-2 RT-PCR pool in a multiple sample. *Indian J Med Res.* April 2021. DOI: 10.4103/ijmr.IJMR_4282_20.
6. Ghoshal U, Garg A, Vasanth S, Arya A K, Pandey A, Tejan N, Patel V, Singh V P; Assessing a chip based rapid RTPCR test for SARS CoV-2 detection (TrueNat assay): A diagnostic accuracy study; *Plos one*,16, e0257834,2021.
7. Ghoshal UC, Ghoshal U, Rahman M, Mathur A, Rai S, Akhter M, Mostafa, Mohammad S, Sheikh A, Pandey A; Post-infection functional gastrointestinal disorders following Coronavirus disease-19: A case-control study; *Journal of Gastroenterology and Hepatology*; 2021.
8. Ghoshal UC, Sahu S, Biswas SN, Singh P, Chaudhary M, Ghoshal U, Tiwari P, Rai S, Mishra SK. Care of inflammatory bowel disease patients during coronavirus disease-19 pandemic using digital health-care technology. *JGH Open.* 2021; 29:535-41.
9. Kasturi Hazarika, Rasmi Ranjan Sahoo, Digvijay Ekbote, Ajai Kumar Dixit, Rungmei S K Marak, Anupam Wakhlu. Multidrug-resistant novel *Nocardia neocaledoniensis* brain abscess in sarcoidosis. *BMJ Case Reports.* 2021;14 (4): e240123.
10. Mehta P, Sarkar S, Ghoshal U, Pandey A, Singh R, Singh DV, Vishvkarma, Rahul, Ghoshal UC, Maurya, Ranjeet, Pandey, Rajesh; Severe Acute Respiratory Syndrome Coronavirus-2 genome sequence variations relate to morbidity and mortality in Coronavirus Disease-19; *bioRxiv*; 2021.
11. Mishra R, Kesarwani V, Nath A. Assessment of burden of drug-resistant tuberculosis at a tertiary care centre in northern India: a prospective single centre cohort study. *BMJ Open* 2021;11: e044096.
12. Patel SS, Singh S, Sahu C, Ghoshal U, Verma H. A three-year seroepidemiological and molecular study of Epstein-Barr virus infection among different age groups with hematological malignancies in a Tertiary care centre of North India (2017-2019). *Journal of Family Medicine and Primary Care.* 2021; 10:373-377.

13. Patel SS, Singh S, Sahu C. " A three-year Sero epidemiological and molecular study of Epstein -Barr virus infection among different age groups with hematological malignancies in a Tertiary care centre of North India (2017 -2019) ". J Family Med Prim Care 2021; 10: 373-7.
14. Patel SS, Yaduvanshi N, Sahu C, Singh S, Agarwal A, Ghoshal U. Epidemiology, Antimicrobial susceptibility patterns and outcomes of bacteraemia in an Apex trauma center of a tertiary health care institute with special reference to Methicillin Resistant Staphylococcus aureus (MRSA). International Journal of Medical Sciences and Current Research 2021; 4(2): 435-443
15. Pathak A, Singh S, Singh S, Patel S, Fatima. N, Garg A, Ghoshal U, Sahu C; Prevalence and effect of bacterial co-infections on clinical outcomes in hospitalized COVID-19 patients at a tertiary care centre of India; medRxiv; 2021-16.
16. Patnaik R, Misra R, Azim A, Harshvardhan R, Gurjar M, Baronia A K et al. Evaluation of ventilator associated events in critically ill patients with invasive mechanical ventilation: A prospective cohort study at a resource limited setting in Northern India. Journal of Critical Care, Volume 64, 2021, Pages 29-35.
17. Rajat Kharbanda, Anurag Mehndiratta, Rudrapan Chatterjee, Rungmei S K Marak, Amita Aggrawal. Pulmonary mucormycosis in systemic lupus erythematosus: successful management of a case along with review of literature. Clinical Rheumatology. 2021; 41(1):307-12.
18. Siddiqui T, Sahu C, Patel SS, Shamim R. Levonadifloxacin, a novel approved drug exhibiting potent in vitro activity against Gram positive bacterial isolates from intensive care units: A descriptive study. J Clin Diagn 2021; 15(7), DC26-DC29.
19. Singh S, Patel SS, Sahu C, Ghoshal U; Seroprevalence trends of Scrub typhus among the febrile patients of Northern India: A prospective cross-sectional study; Journal of Family Medicine and Primary Care 2021;10: 2552-2557.
20. Singh S, Patel SS, Sahu C, Ghoshal U. Seroprevalence trends of Scrub typhus among the febrile patients of Northern India: A prospective cross-sectional study. J Family Med Prim Care 2021; 10:2552-7.
21. Singh S, Pathak A, Rahman M, Singh A, Nag S, Sahu C and Prasad KN. Genetic Characterisation of Colistin Resistant Klebsiella pneumoniae Clinical Isolates From North India. Front. Cell. Infect. Microbiol (2021) 11:666030. doi: 10.3389/fcimb. 2021.66603.
22. Singh S, Sahu C, Patel SS, Garg A, Ghoshal U. Pandoraea apistabacteremia in a COVID positive male: A Rare coinfection case report from North India. J Lab Physicians 2021; 13: 194-196.
23. Singh S, Sahu C, Patel SS, Singh S, Ghoshal U. Clinical profile, susceptibility patterns, speciation and follow-up of infections by Elizabethkingia species: Study on a rare nosocomial pathogen from an intensive care unit (ICU) of North India. New Microbes and New Infect 2020; 38:100798. DOI: 10.1016/j.nmni.2020.100798
24. Sinha R, Rahul. Post Liver Transplantation Diarrhea: Etiology, Evaluation and Treatment. Int J Med Public Health. 2021;11(3):126-32.
25. 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 2021 Feb 2:284185121990286. Doi 10.1177/0284185121990286. Epub ahead of print. PMID: 33530697.
26. Tasneem Siddiqui, Chinmoy Sahu, Sangram Singh Patel, Ujjala Ghoshal, Clinical and Microbiological Profile of Patients with Bloodstream Infections Caused by Burkholderia cepacia Complex CC BY-NC-ND 4.0 · J Lab Physicians DOI: 10.1055/s-0042- 1742634

27. Thayanidhi Premamalini, Vijayaraman Rajyoganandh, Ramaraj Vijayakumar, Hemanth Veena, Anupma Jyoti Kindo, Rungmei S K Marak. Strain typing of Trichosporonasahii clinical isolates by Random Amplification of Polymorphic DNA (RAPD) Analysis. Journal of Laboratory Physicians. 2021; 13(3): 245-51.
28. Thomas K N, Sahu C, Aggarwal A. Ralstoniamannitolilytica bacteraemia and gastroenteritis in a patient with rheumatoid arthritis: an emerging nosocomial infection. Rheumatology 2020. <https://doi.org/10.1093/rheumatology/keaa830>
29. Uniyal R, Garg RK, Malhotra HS, Tejan N, Kumar N, Pandey S, Shekhar R. A Case of Subacute Sclerosing Panencephalitis: Some Unusual Clinico-Radiological Manifestations. Neurology India. 2021 Sep 1;69(5):1446.

Visiting Professors: None

Departmental Highlights:

1. With the event of the COVID-19 pandemic, Director Dr. R K Dhiman established the COVID-19 Task Force Committee /Laboratory Committee in the Institute and the Department adapted and changed its pattern to meet the needs of the ongoing COVID-19 pandemic as the laboratory diagnosis falls solely on its shoulders from 2020 end of 2021. It all started on 19th March 2020, when ICMR chose the Department of Microbiology from SGPGIMS for conducting RT-PCR tests. The department has geared up to meet all the diagnostic challenges and 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 special 24-hour laboratory dedicated to this pandemic was established from scratch. Since the beginning, samples from almost 25 districts have been tested by our laboratory. The 24x7 COVID-19 laboratory was processing 4000-5000 plus samples every day.
2. The Department of Microbiology come to the forefront and starting training their residents/ staff as well as the JRs/ SRs and faculty of the institute in COVID-19 protocols of proper donning & doffing of PPEs, wearing N95 mask, hand hygiene and biomedical waste management. The support of other faculty members of the Institute, all staff members, members from NHM and PNPSP-WHO Polio project and SGPGI administration esp. Director Dr R K Dhiman is gratefully acknowledged.
3. 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 was working 24/7, away from their families with a pure motto of service 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. Department started sample collection centre at SBI E-corner near PMSSY building. Later when the case load started increasing, 2 more collection booths near SBI E-corner and one more collection booth near RCH-1 were added.



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DEPARTMENT OF MEDICAL ONCOLOGY

STAFF

Name of Faculty Members:

1. Punita Lal, MD Prof & Head
(Additional Charge, 15th July 2021)

The Department came into existence by the efforts of the Director, Prof R.K. Dhiman in the year 2021 vide order no - PGI/DIR/DC/563/21 dated 15th July 2021 and Dr. Punita Lal, Professor-Radiotherapy Department was designated as first HEAD of the Department of Medical Oncology by the Director, SGPGI . Also 20 bedded ward for Medical Oncology was allocated in the Bay-2 of Old OPD Area of Hospital.

Service: Nil

Traning: Nil

Research Completed: Nil

Research in progress: Nil

Publications: Nil

Chapters: Nil

Visiting professors: Nil

Awards & honours: Nil

Departmental highlights: Nil

New intiatives: Nil

Patent: Nil



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DEPARTMENT OF MOLECULAR MEDICINE & BIOTECHNOLOGY

STAFF

Name of Faculty Members:

- | | |
|---------------------------------------|---------------------|
| 1. Swasti Tiwari, Ph.D., FRCP (Edin), | Professor & Head |
| 2. Alok Kumar, PhD | Associate Professor |
| 3. Lokendra Kumar, PhD | Assistant Professor |
| 4. Santosh Kumar Verma, PhD | Assistant Professor |

Awards and Recognitions

Dr. Swasti Tiwari:

- Best Research paper award on 2nd Research Day at SGPGIMS, Lucknow
- Appointed as Editorial associate member in the editorial board of Frontiers in medicine

Invited sessions and chairpersons/lectures for Conferences: 2021

Name of faculty and Session

Dr. Swasti Tiwari:

- 10th Annual Meeting of the International Society of Extracellular Vesicles, July 14- July 16, 2021.
- National Webinar on “Nutritional Health, Low Cost Diet and Nutrition during Covid-19 for Rural Women in India” at Babasaheb Bhimrao Ambedkar University, September 30, 2021.

Dr. Alok Kumar

- International Indo-US Workshop on “Pain Mechanism & Therapeutics”, Department of Pharmaceutical Engineering & Technology, Indian Institute of Technology, BHU, Varanasi, India, May 6-May 10, 2021.
- 4th Satellite Symposium of XXXIX-Annual Meeting of the Indian Academy of Neuroscience (IAN), IISER, Kolkata & CSIR-Indian Institute of Chemical Biology (IICB), December 15, 2021.

Dr. Lokendra Sharma

- “Regulation of Mitochondria in Cancer: Implications in molecular subtyping and mitochondrial therapeutics”, Department of Biotechnology, Central University of South Bihar, December 22, 2021.

Dr. Santosh Kumar Verma

- “Research Methodology & Innovations in Life Sciences”, Department of Biotechnology, IPR Cell & Centre for Genomics and Bioinformatics, DDU Gorakhpur University, June 25- July 1, 2021.



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Membership of Societies

Membership of professional bodies funded by Institute

Dr. Swasti Tiwari

- American Physiological Society (APS)
- Internal Society of Extracellular vesicles (ISEV)

Services

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

Year-wise number of investigations (last three years 2019, 2020, 2021).

S. No	Parameters	2019	2020	2021
	Total Number of:			
1	Serum Alfa fetoprotein	1199	381	957
2	Quadruple test	421	160	175
3	Double marker test	378	196	173
4	Serum HCG	117	32	55
5	Homocysteine	724	263	528
6	HPV	262	61	198

Teaching and Training

PhD program:

Total number of undergoing PhD in the year 2021: 10 students.

Total number of awarded PhD in the year 2021: 01 student.

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

Hands-on training in biotechnology methods to Master students from different colleges/ universities.

Total number of students completed short term training in the year 2021: 3 students.

Research Completed in 2021:

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

1. **DST-Nanomission Grant, Umbilical cord mesenchymal stem cells derived exosomes as biogenic nanocarriers of miRNA and chemotherapeutic drug for reversal of chemoresistance in breast cancer**, Summary report: Through this project we demonstrated the ability of Umbilical cord mesenchymal stem cells derived exosomes as a biogenic nanocarrier for the co-delivery of tumor suppressor miR-125a and microtubule destabilizing Docetaxel (DTX) to target the proliferative and migratory aggressiveness of the murine cancer cells. The findings have been published that clearly demonstrated the synergistic apoptotic and anti-migratory efficiency of miR-125a expressing DTX loaded exosomal formulation. The project was carried out in collaboration with BITS Pillani (PMID: 37001803), PI: Dr. Swasti Tiwari.



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2. **SGPGI, Brain Ageing Research: role of Genetic Modified Extra Cellular Vesicles (EVs) in Modulation of Age Related Chronic Neuroinflammation and Neuronal Function**, Summary report: It is noted that microparticle (MPs)-mediated cellular interaction plays a key role in developing neuroinflammation-related pathologies in young/aged animals after LPS exposure. It is observed that MPs modulation could be an important therapeutic approach for controlling neuroinflammation development in both young and aged LPS model. PI: Dr. Alok Kumar.
3. **SGPGI, Development of Predictive Markers for Maternal and Neonatal Health Through Investigation of Mitochondrial changes During Healthy Pregnancy (A Pilot Study)**, Summary report: This study suggested that normal pregnancy is associated with an opposing trend of reduced cellular mtDNA with increased circulatory mtDNA and H₂O₂ levels, which may contribute to maternal adaptation, required during different stages of pregnancy. Altogether, estimation of mtDNA distribution and ROS level in maternal blood could show mitochondrial functionality during normal pregnancy, and could be exploited to identify their prognostic/diagnostic potential in pregnancy complications in future. (Publication: Srivastava, A. et al BMC Pregnancy Childbirth. 2022 Nov 16;22(1):845)PI: Dr. Lokendra K. Sharma.
4. **SGPGI, Gene Expression Analysis During Trophoblast Cell Fusion Process**, Summary report: In this study we analyzed signature gene expression in human placental choriocarcinoma cell-fusion process and report the expression of various novel syncytiotrophoblast regulating genes involved in placenta shaping,PI: Dr. Santosh Kumar Verma.

Research in Progress:

Funding agency, Title of project, Name of PI

1. DBT, Role of extra domain A fibronectin (FN-EDA) in mediating insulin resistance (IR) in mice, **Dr. Swasti Tiwari**
2. ICMR, CARE on Kidney Diseases-Biomarkers & newer therapeutic, **Dr. Swasti Tiwari**
3. DBT, Monitoring placental health & function across pregnancy using placental derived nanovesicles in maternal blood-full, **Dr. Swasti Tiwari**
4. SGPGI, Validation of 'Hi-Screen' test for COVID-19 Developed at SGPGI, **Dr. Swasti Tiwari.**
5. DBT **Ramalingaswamy Re-entry**, Autophagy regulation of microglia/macrophage phenotype and catecholaminergic neuronal function followed by Japanese encephalitis virus infection, **Dr. Alok Kumar.**
6. DST-SERB, Investigation of metastatic potential of mitochondria and associated mechanisms using trans-mitochondrial cybrids.**Dr. Lokendra K. Sharma.**
7. ICMR, Targeting mitophagy in breast carcinogenesis through mitochondrial-mediated mechanisms,**Dr. Lokendra K. Sharma.**
8. SGPGI, Targeting of Glioblastoma Stem Cells through modulation of mitochondrial mechanisms for developing effective Therapeutic Approaches,**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. SGPGI, Comparison of Cytotrophoblast Cell-Fusion Markers in Placenta of Early and Term Gestation (A Pilot Study),**Dr. Santosh Kumar Verma.**



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Publications:

Indexed Publications:

1. Ghildiyal S, Fatima T, Singh D, Upadhyay S, Dhole TN, Himanshu Reddy D, Kumar A. Pro-inflammatory and anti-inflammatory cytokine genes polymorphisms and susceptibility to Japanese encephalitis disease in the North Indian population. *Cytokine*. 2022 Jan;149:155716.
2. Godbole U, Basantani M, Yadav S, Godbole N, Khandpur S, Godbole M, Raza S, Mbuya MNN, Neufeld LM. The Impact of Double-Fortified Salt Delivered Through the Public Distribution System on Iodine Status in Women of Reproductive Age in Rural India. *Curr Dev Nutr*. 2021 Mar 30;5(4):nzab028.
3. Joshi K, Cameron F, Tiwari S, Mannering SI, Elefanty AG, Stanley EG. Modeling Type 1 Diabetes Using Pluripotent Stem Cell Technology. *Front Endocrinol (Lausanne)*. 2021 Apr 1;12:635662.
4. Khandpur S, Bhardwaj M, Awasthi A, Newtonraj A, Purty AJ, Khanna T, Abraham G, Tiwari S. Association of kidney functions with a cascade of care for diabetes and hypertension in two geographically distinct Indian cohorts. *Diabetes Res Clin Pract*. 2021 Jun;176:108861.
5. Parveen A, Mishra S, Srivastava M, Chaudhary DK, Kapoor D, Gupta A, Tiwari S. Circulating Placental Alkaline Phosphatase Expressing Exosomes in Maternal Blood Showed Temporal Regulation of Placental Genes. *Front Med (Lausanne)*. 2021 Dec 24;8:758971.
6. Rai NK, Panjwani G, Ghosh AK, Haque R, Sharma LK. Analysis of mitochondrial DNA copy number variation in blood and tissue samples of metastatic breast cancer patients (A pilot study). *BiochemBiophys Rep*. 2021 Feb 3;26:100931.
7. Randhawa S, Sengar S. The evolution and history of gene editing technologies. *Prog Mol BiolTransl Sci*. 2021;178:1-62.
8. Sharma R, Kumari M, Mishra S, Chaudhary DK, Kumar A, Avni B, Tiwari S. Exosomes Secreted by Umbilical Cord Blood-Derived Mesenchymal Stem Cell Attenuate Diabetes in Mice. *J Diabetes Res*. 2021 Dec 10;2021:9534574.
9. Sharma R, Tiwari S. Renal gluconeogenesis in insulin resistance: A culprit for hyperglycemia in diabetes. *World J Diabetes*. 2021 May 15;12(5):556-568.
10. Tiwari S, Kumar V, Randhawa S, Verma SK. Preparation and characterization of extracellular vesicles. *Am J Reprod Immunol*. 2021 Feb;85(2):e13367.
11. Yadav S, Khandpur S, Yadav YS, Goel MM, Singh U, Natsu SM, Negi MPS, Sharma LK, Tiwari S. Model for Early Prediction of Preeclampsia: A Nested Case Controlled Study in Indian Women. *J ObstetGynaecol India*. 2022 Aug;72(4):299-306.

Non-Indexed Publications:

1. Agarwal J, Singh V, Garg J, Karoli R, Tiwari S, Naqvi S, Das A, Sen M. RNAemia and clinical outcome in COVID-19 patients. *Journal of Microbiology and Infectious Diseases*. 2021;11:116-23.
2. Li L, Holloway C, Lee H, Sharma R, Tiwari S, Ecelbarger CM. Protective Effect of 17 β Estradiol against Kidney Injury in a Mouse Model of Unilateral Renal Ischemia. *Journal of Nephrology & Renal Therapy*. 2021; 7: 046.

Book Chapters

1. Singh G, Rao D, Kumar A. Molecular Basis of Neurological Disorders. In: Kumar S, editor. *The Molecular Immunology of Neurological Diseases*. Academic Press; 2021. p. 1-13.

Visiting Professor/ Distinguish Professor/ Online lecture series

1. Prof. Arlan Richardson, Director, Oklahoma Nathan Shock Aging Center, Oklahoma City, OK, United States, "Role of Inflammaging in Aging and Age-Related Diseases", July 15, 2021.
2. Prof. Edward Prochownik, Director of Oncology Research, UPMC Children's Hospital of Pittsburgh, PA, United States, "Drivers of Paediatric Liver Cancer and its Biological Diversity", July 30, 2021.
3. Prof. Russel J. Reiter, Department of Cell Systems & Anatomy, The University of Texas Health Science Center at San Antonio, TX, United States, "Melatonin as a Treatment for COVID-19 Pathophysiology", August 12, 2021.
4. Dr. Ganesh V. Halade, Department of Medicine, Division of Cardiovascular Sciences, University of South Florida (USF), Tampa, FL, United States, Inflammation-Resolution Signaling in Heart Failure, September 16, 2021.

Department Highlights:

1. In the year 2021, the department has 10 ongoing projects is going from various funding agencies, including DBT, SERB, ICMR and DST.
2. The department has successfully completed 4 research projects this year.
3. The department is successfully running ICMR Centre of Advance Research and Excellence on Kidney Diseases- Biomarkers & newer therapeutics.
4. PhD students and Faculty members of the Department received Best Research paper awards at the 2nd Research Day events of the institute in 2021.
5. The departmental faculty members have published 13 peer reviewed publications, and 2 book chapters in the year 2021.
6. One PhD students has been awarded the degree; 10 students are perusing PhD course in the year 2021.



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DEPARTMENT OF NEONATOLOGY

STAFF

Name of Faculty Members:

- | | |
|---|---|
| 1. Dr Kirti M Naranje, MBBS, MD | Additional Professor & Head |
| 2. Dr Anita Singh MBBS, MD Pediatrics | Additional Professor |
| 3. Dr Aakash Pandita, MBBS, MD Pediatrics | Assistant Professor
(Contractual DOJ: 5-6-21) |
| 4. Dr Akanksha, MBBS, MD | Assistant Professor
(Contractual DOJ: 12-6-2021) |

Awards and Recognitions

Dr. Kirti Naranje

- Member of State Technical Advisory Unit for Severe Acute Malnutrition (STAU) on the program context for Severe Acute Malnutrition, Global recommendation, National guidelines, and clinical management protocol for SAM
- National Instructor , Neonatal resuscitation Program India 2021
- External expert for PhD thesis - Role of Amplitude integrated EEG in prediction of neurodevelopmental outcome in near term infants (>35 weeks gestation) with encephalopathy or at high risk of neurological sequelae. 2022.
- External examiner for DM/M.Ch May - June 2021 final theory examination at AIIMS, Rishikesh.

Dr. Anita Singh

- Mentor for Neonatal modules for “Emergency crisis and Management solution”
- Divisional Co-ordinator for National PG Quiz
- National Instructor , Neonatal resuscitation Program India 2021
- External examiner for DM/M.Ch May - June 2021 final theory examination at AIIMS, Rishikesh.

Invited sessions and chairpersons/lectures for Conferences: 2021

Name of faculty and Session

Dr. Kirti Naranje

- As faculty speaker (neonatal nutrition) and moderator (ABG analysis) Neonatologist Education by Tele Training Series in Uttarakhand (NETTSU) series held from Feb 2021 to Dec 2021
- Faculty panelist for MILAN- NNF-FOGSI Perinatal meeting on 09th & 10th October 2021 for panel discussion on IUGR
- As a faculty in Panel discussion on Technology in the NICU held at NEOCON 2021 from 16th - 19th December 2021 at Bengaluru, India
- As a faculty speaker for Neonatal Master series-2 for the topic “All you need to know about HHHFNC” held in July 2021 virtual
- Faculty for Pediatric COVID 19 training of Doctors in Uttar Pradesh in 2021-2022 - (Endotracheal intubation in children, Weaning and extubation in children) Directorate Medical Education, UP

- Faculty speaker and organizer for CME on “Hypoxic ischemic encephalopathy in Newborn” 20th and 21st November 2021.
- Faculty speaker and organiser in association with LNF for online non-invasive ventilation workshop on 30th and 31st July 2021.
- Panellist for online webinar on “COVID 19 Third wave a fact or myth” organised by AAOTT,UP (dept of Anaesthesia, SGPGIMS) held on 8th June 2021
- Faculty speaker at online 11th CME on “Neonates and kidney disease” as a part of “Touching Basics Of Nutritional Intervention” being organized by the Society of Renal Nutrition and Metabolism held on 7th November 2021
- Expert evaluator for oral presentation of papers at 2nd central zone NEOCON and UP NEOCON 2021 held on 25th and 26th September 2021 in Meerut.
- Expert Judge for PG Quiz at 2nd central zone NEOCON and UP NEOCON 2021 held on 25th and 26th September 2021 in Meerut

Dr. Anita Singh

- Faculty for Pediatric COVID 19 training of doctors in Uttar Pradesh 2021-22 organized by Directorate of Medical Education, Uttar Pradesh
- Faculty speaker for the topic “Feeding in special situations” by Lucknow Indian Medical Association on August 2021
- Faculty for live interactive session on “Queries related to breastfeeding” by Lucknow Academy of Pediatrics in August 2021
- Faculty speaker for topic “Management of hypoglycemia” at UPNEOCON in September 2021
- Faculty speaker on “Safe newborn care: Act now for respectful newborn care” on CME organized by Department of Hospital Administration on World Patient Safety Day
- Faculty speaker on topic ‘Child safety at home’ by Department of Pediatric Surgery in November 2021 at SGPGIMS
- Faculty for topic “CPAP therapy in neonates” by NETTSU on 11 November 2021
- Faculty speaker for topic “Amplitude integrated EEG in HIE” during workshop on hypothermia in November 2021
- Faculty speaker at online 11th CME on “Management of kidney complications in neonates and infants” organized by Society of Renal Nutrition on 7th November 2021
- Faculty speaker and organizer in association with Lucknow Neonatology Foundation for online non-invasive ventilation workshop on topic “ ABG interpretation” 30-31 July 2021

Dr Aakash Pandita

- Faculty speaker and organized for CME on “Hypoxic Ischemic Encephalopathy in Newborns” on topic “therapeutic hypothermia” 20-21 November 2021
- Faculty speaker and organizer in association with Lucknow Neonatology Foundation for online non-invasive ventilation workshop on topic “ CPAP therapy in neonates” on 30-31 July 2021

Dr Akanksha Verma

- Faculty speaker and organized for CME on “Hypoxic Ischemic Encephalopathy in Newborns” on 20-21 November 2021
- Faculty speaker and organizer in association with Lucknow Neonatology Foundation for online non-invasive ventilation workshop on 30-31 July 2021



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- Faculty speaker at online 11th CME on “Nutrition in kidney disease in neonates and infants” organized by Society of Renal Nutrition on 7th November 2021

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
- 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
- Education Committee member of International Newborn Brain Society
- 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

Teaching Workshops/ CME's organized 2021

1. Online ‘Neonatal Nutrition’ Workshop March 2021
2. Neo- Masterclass Series on ‘Non-Invasive ventilation in neonates’ July 2021
3. Online 2-day CME and workshop on ‘Hypoxic Ischemic Encephalopathy in newborns ‘20-21 November 2021
4. Online pediatric covid training module

Service

S.No	Parameters	2019	2020	2021
1	Number of New patients in OPD	738	457	552
2	Number of Old/ Follow-up patients in OPD	6771	2151	3335
3	Total patients in OPD	7509	2608	3887
4	Total number of patients admitted (IPD)	823	439	470
5	Total number of neonates on warmers	660	358	360
6.	Total number of patients on ventilator	334	178	220
7.	Total number of Neonates on phototherapy	561	292	243
8.	Total exchange transfusion	75	51	75

Training

The Department of Neonatology started running a one-year Post Doctoral Certificate Course (PDCC) in Neonatology since year 2017 with 02 seats. The PDCC seats were increased to 06 in 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. Transcutaneous bilirubinometry from patched skin and its correlation with serum bilirubin during and after phototherapy in infants: a prospective observational study **Funding (Intramural) PI:Dr. Anita Singh Summary:** Eighty-four neonates with jaundice who required PT were enrolled to the study. There was strong correlation between TSB and TCB from covered area ($r= 0.84$, $P<0.001$) after 24 hours of initiation of phototherapy. This strong correlation at covered site persisted throughout the duration of phototherapy, improving further after stopping of phototherapy.
2. A Quality improvement initiative to complete resuscitation cart at time of resuscitation **Funding (Intramural) PI: Dr. Kirti M. Naranje Summary-** Aimed at developing a designated mobile organised emergency trolley and improve its adherence in NICU during all the three working shifts to over 80%. Compliance improved from 0% to 90%.
3. A Quality improvement initiative to improve nursing handover in NICU **Funding (Intramural) PI:Dr. Anita Singh Summary:** Aimed to improve implementation of proper handover. The improvement in compliance was over 80% in all the three shifts

Research in progress

1. Rate of self extubation in neonates with endotracheal tube fixation with central vs. corner method **Funding (Departmental) PI:Dr. Anita Singh**
2. Prevalence of Congenital anomalies and their outcome in neonates admitted to a referral centre in northern UP **Funding (Departmental) PI:Dr. Kirti M. Naranje**
3. Neurodevelopmental outcomes of Rh isoimmunized infants by DASII scale in a tertiary care centre **Funding (Departmental) PI:Dr. Kirti M. Naranje**

Publications

1. Panghal A, Gupta AK, Singh A, Naranje K, Gupta G. An Innovative Three-in-One Face Protective Gear (FPG): A Feasibility Study in a Neonatal Unit in Times of Pandemic. J Neonatol. 2021 Jul-Sep; 35(3):176-179.
2. Pandita A, Singh A, Naranje K, Upadhyaya VD, Upadhyaya AD, Kumar B. Application of salt for 3 days locally sufficient to treat umbilical granuloma. Afr J Paediatr Surg. 2021 Jul-Sep;18(3):121-124.
3. Bellos I, Fitrou G, Panza R, Pandita A. Comparative efficacy of methods for surfactant administration: a network meta-analysis. Arch Dis Child Fetal Neonatal Ed. 2021 Nov;106(6):647-654.
4. Bellos I, Yacha M, Pandita A. Effectiveness of theophylline administration in neonates with perinatal asphyxia: a meta-analysis. J Matern Fetal Neonatal Med. 2021 Jul;34(13):2141-2149.
5. Singh A, Mandelia A, Verma P, Naranje KM, Gupta G. Giant feeding artery from abdominal aorta in intralobar pulmonary sequestration. J Indian Assoc Pediatr Surg. 2021 Jul-Sep;26(3):195-197.
6. Roy A, Mandal K, Naranje K, Singh A. A case of hypotonic neonate. Neoreviews. 2021 Oct;22(10):e785-e789.



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7. Bajpai S, Gutam A, Naranje K, Singh A. A case of unilateral facial swelling. *Neoreviews*. 2021 Dec;22(12):e874-e879.
8. Diwedi M, Mandal K, Naranje K, Singh A. A case of hypotonia with respiratory distress. *Neoreviews*. 2021 Aug;22(8):e555-e559.
9. Singh A, Kaur H, Gupta G, Naranje K, Verma A, Roy A, Gautam A, Pandey A, Gupta A, Jaiswal R, Bajpai S, Dwivedi M, Birthare A. Enhancement of immunity and health in neonates and infants. *J Neonatol*. 2021;35(2):101-107.
10. Naranje KM, Gupta G, Singh A, et al. Neonatal COVID-19 infection management. *J Neonatol*. 2021;35(1):1-9.
11. Abdullah, Kadam P, Yachha M, Srivastava G, Pillai A, Pandita A. Urinary beta-2 microglobulin as an early predictive biomarker of acute kidney injury in neonates with perinatal asphyxia. *Eur J Pediatr*. 2021;180(6):1721-1728.

Non- Indexed Publication

1. Dwivedi M, Singh A, Naranje K. Impact of neonatal counselling on parental stress in a neonatal intensive care unit: a quasi-experimental study. *Indian J Neonatal Med Res*. 2021;9(2):83-88.
2. Pandey A, Bajpai S, Singh A, Naranje K, Gupta G. An innovative low-cost personal protective equipment gown made by biomedical trash bags. *Indian J Child Health*. 2021;8(6):451-454.
3. Pandey A, Bajpai S, Verma A, Singh A, Naranje K, Gupta G. Smartphone usage in neonatal intensive care unit. *Indian J Child Health*. 2021;8(6):412-415.
4. Kaur H, Singh A, Naranje K. How we handled COVID crisis? Experience of an Indian tertiary level NICU. *Indian Journal of Child Health*. 2021;8(9):814-818.

Chapter(s) in Books

1. Mallikarjun HB, Anita Singh. Feeding in Congenital Malformation. In: *IAP-IYCF Essentials of Maternal, Infant, Young Child and Adolescent Nutrition*. Tree Life Media Publishing; 2021.
2. Anita Singh. Total Parenteral Nutrition. In: *IAP-IYCF Essentials Of Maternal, Infant, Young Child and Adolescent Nutrition*. Tree Life Media Publishing; 2021.
3. Gupta G, Kaur H, Dukhovny S, et al. Fetal Well Being Assessment and Prenatal Diagnosis. In: *Cloherly and Stark's Manual of Neonatal Care*. Wolters Kluwer; 2021.

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



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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
13. Perinatal counselling
14. Immunization services

New Initiatives

1- The Department of Neonatology, along with tremendous assistance from Prof. S.M. Natu from the 24-hour stat lab, has started a micro-method of sampling in microtainers for routine investigations so that tests can be carried out with the minimum amount of required blood (0.5 to 1 ml). This will help in reducing the iatrogenic blood losses and thereby the need of packed cell transfusion in neonates and pediatric cases. The department has procured EDTA, plain, fluoride and heparin microtainers through the Investigation Revolving Fund of the institute.

Awards and honors: 2021

1. Dr Abhijeet Roy (SR DM): 3rd prize in award paper category, UPNEOCON, 2021
2. Dr Shivani Bajpai (SR PDCC): Second best free paper presentation at State level Neonatology Conference, UPNEOCON, 2021
3. Mrs Agnes Lata Cecil and Miss Jyoti Kumari (Nursing officers): Third prize in collage making competition on International Hand Hygiene Day National Neonatology Forum 2021



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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

Activities

Awards and Recognitions

Dr. Narayan Prasad

International Award

- Executive member- International Society of Nephrology-Sister Renal Centers Committee-2019-21
- Executive Member – International Society of Nephrology-Renal Sister Programme
- Executive Member – South Asia Regional Board, International Society of Nephrology
- CME Excellence, Dronacharya Awards, IHW council, and Omnicuris, 2021
- American College of Physicians, India Chapter, For COVID Saviour, on occasion of Doctors day, 2021.

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

National

1. Secretary, Indian Society of Nephrology
2. Editor, Indian Point of Care (Elsevier)
3. Associate Editor, Indian Journal of Nephrology.
4. Associate Editor, Indian Society of Organ Transplantation
5. Editorial Board – Seminar in Dialysis

Dr. Dharmendra Bhadauria

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



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Invited sessions and chairpersons/lectures for Conferences: 2021**Prof. Narayan Prasad**

- Organizer and moderator, webinar on Transplantation, with Prof T Muthukumar and Anil Chandrakar, USA on 4th Sept 2021
- 31st Annual Conference of Indian Society of Organ Transplantation. Hidden non-alloantibodies induced injuries in Kidney Transplantation. Session Transplant Immunology, 8th October 2021, Kochi.
- Volume management in PD patients. International Society of Nephrology- SRC initiative. A masterclass on practical aspect of peritoneal dialysis. 24th Nov 2021
- Infectious Complications. International Society of Nephrology- SRC initiative A masterclass on practical aspect of peritoneal dialysis. 24th Nov 2021
- Nephrology Quiz master. NUTS of SAARC meeting. 24th September 2021.
- Ultrafiltration failure: how do you manage. 51st Annual Conference of Indian Society of Nephrology held from 9th to 12th December 2021 at Chennai.
- Webinar speaker- Redefining management of T2D through Nephrologist lens. 16th July 2021.
- INFORM webinar. Panel discussion and chair. Interventional nephrology on Kidney Biopsy. 31st July 2021.
- ALL India Radio, Good morning, Lucknow. Message. For Kidney, COVID and vaccination 10th Aug 2021.
- Webinar E-Diatrans- Padmini Seva Mandal Moderator-Challenges in Live and cadaveric Transplant in India. 5th March 2021.
- How is the gut flora of a CKD patient different from that of a healthy individual and what are its implications. 7th Advance Course in Renal Nutrition And Metabolism 2021” 7th ACRNAM2021 23rd April (Friday)
- Panel discussion: Human Organ Transplantation Act: Need to improve 30th Jan 2021
- Natural course of diabetic nephropathy. 7th Advance Course of Renal Nutrition and Metabolism, SGPGIMS, Lucknow from 21-24 April 2021.

Prof. Anupma Kaul

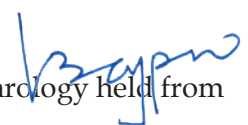
- 51st Annual Conference of Indian Society of Nephrology held from 9th to 12th December 2021 at Chennai.
- National obstetrics and gynecology conference held at Gorakhpur in November 2021 –“Impact of renal transplant among female recipients”
- Indian society of Nephrology , Chennai 2021- “Renovascular hypertension- challenges and delimmas ”
- Indian society of Nephrology (North zone) Banaras 2022- “Autosomal dominant tubulo interstitial Kidney Diseases”

Dr. D.S. Bhadauria

- Medical management of multiple myeloma. 51st Annual Conference of Indian Society of Nephrology held from 9th to 12th December 2021 at Chennai.

Dr. Manas Ranjan Patel

- COVID in Dialysis patients. 51st Annual Conference of Indian Society of Nephrology held from 9th to 12th December 2021 at Chennai.



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- Panel discussion. 7th Advance Course of Renal Nutrition and Metabolism, SGPGIMS, Lucknow from 21-24 April 2021.

Dr. Monika Yachha

- Acute cortical necrosis in PAKI. 51st Annual Conference of Indian Society of Nephrology held from 9th to 12th December 2021 at Chennai.
- Panel discussion. 7th Advance Course of Renal Nutrition and Metabolism, SGPGIMS, Lucknow from 21-24 April 2021.

Dr. M.R. Behera

- Follow-up and nutritional advise for VKD. 7th Advance Course of Renal Nutrition and Metabolism, SGPGIMS, Lucknow from 21-24 April 2021.

Dr. Ravi S Kushwaha

- Panel discussion. 7th Advance Course of Renal Nutrition and Metabolism, SGPGIMS, Lucknow from 21-24 April 2021.

Teaching Workshops/CMEs Organized

1. Organized 7th Advance Course in Renal Nutrition and Metabolism
2. Kidney Day, Department of Nephrology, SGPGIMS, Lucknow on 11th March 2021.

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)



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- 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)

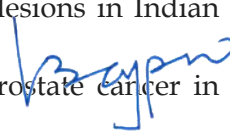
Dr Ravi Shankar Kushwaha

- 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)

Services

Clinical services

		2019	2020	2021
OPD	Total patients	66982	11301	41901
	New patients	8653	2348	5321
	Follow-up patients	28733	18744	31433
	Transplant patients	6964	6568	5147
Admissions	Ward admissions	2727	771	2209
	ICU admissions (ICU-Dialysis)	958	283	399
Kidney transplants	Live donor ABO compatible	96	36	16
	Live donor ABO incompatible	19	9	1
	Cadaveric donor	2	0	0


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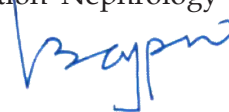
Emergency services	Emergency consultations	1722	1620	1488
	Emergency admissions	632	552	543
	Interdepartmental consultation	1402	1287	936
Dialysis procedures	Hemodialysis sessions (HD)	41348	33040	34361
	Online hemodiafiltration sessions (OLHDF)	764	552	1283
	Plasmapheresis	233	259	350
	Continuous renal replacement therapy (CRRT)	97	96	167
	SLED	643	752	791
	AVF	686	336	368
	IJV Insertion	543	618	872
	Permacath insertion	415	304	323
	Permacath removal	88	91	103
	New patients	876	964	1074
	Femoral insertion	956	1036	1353

Investigations

Total number of investigations of Renal Lab and Transplant Immunology Lab		Nos
Renal Lab	Hematology (Hb, TLC, HCT, ESR, DLC, CBC, Retic)	14706
	Viral machine quantitative PCR, HBV DNA, HCV RNA	580
	Biochemistry: KFT, LFT, lipid profile, electrolytes, Mg, Phos, Ca ⁺⁺ , uric acid, amilage, blood sugar, Iron TIBC, UIBC, HDL	7199
	Drug assays: CsA, Tacrolimus	6522
	Hormonal : PTH, vitamin D	10878
	Iron profile: Iron, TIBC, folate, B12, ferritine	31270
	Urine examination: Urine R/M, pH	11780
	Serology: HIV, HCV, HBsAg, CMV, IgG, CMV IgM	15327
Transplant Immunology Lab	Flow cross match (flow Cytometric)	165
	Donor specific antibody	130
	HLA typing (A,B,DR Lo... DPDQ)	752
	PRA (Panel Reactive antibody)	34
	Single antigen	205

Training:

At present, there are 18 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.



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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. 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).
3. Effect of Tacrolimus on P-glycoprotein Expression on Different T cells Lymphocytes in Steroid Resistant Nephrotic Syndrome Patients (Prof. Narayan Prasad)
4. BKV-nephropathy in renal transplant recipients: clinical manifestation and comparison with acute rejection (Prof. Narayan Prasad).
5. 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. 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)-Prof. Narayan Prasad.
2. 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 - Prof. Narayan Prasad.
3. 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 - Prof. Narayan Prasad.
4. Indian Chronic Kidney Disease (ICKD) study (AN1-VI/SGSOP 08/V1) funded by DBT, New Delhi - Prof. Narayan Prasad.
5. 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 - Prof. Narayan Prasad.
6. To establish a registry of epidemiology, clinical characteristics and outcomes of AKI in India. IEC 2017-113-EMP-97/PGI/BE/478/2017 - II - sponsored by Indian Society of Nephrology - Prof. Narayan Prasad.
7. Effect of Lockdown due to the COVID-19 Pandemic on Treatment Compliance and Graft Outcomes in Kidney Transplant Recipients - Dr. Manas R Patel
8. 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 - Dr. Monika Yachha

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 – 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) – 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 – Prof. Narayan Prasad.
 4. 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 – Dr. D.S. Bhadauria.

Publications:

1. Jeloka TK, Abraham G, Bhalla AK, Balasubramaniam J, Dutta A, Gokulnath null, et al. Continuous Ambulatory Peritoneal Dialysis Peritonitis Guidelines - Consensus Statement of Peritoneal Dialysis Society of India - 2020. Indian J Nephrol. 2021;31(5):425-34.
2. Kapoor A, Baronia AK, Azim A, Agarwal G, Prasad N, Mishra R, et al. Breathability and Safety Testing of Personal Protective Equipment: “Human-comfort” Factor Remains Undefined. Indian J Crit Care Med. 2021 Jan;25(1):12-5.
3. Zahir Z, Wani AS, Prasad N, Jain M. Clinicopathological characteristics and predictors of poor outcome in anti-glomerular basement membrane disease - a fifteen year single center experience. Ren Fail. 2021 Dec;43(1):79-89.
4. Ghoshal U, Tejan N, Sisodia J, Verma S, Prasad N, Uc G. The utility of multiplex polymerase chain reaction for diagnosis of infectious diarrhoea in a tropical country. Indian J Med Microbiol. 2021 Jul;39(3):323-7.
5. Lal H, Singh A, Prasad R, Yadav P, Akhtar J, Barai S, et al. Determination of split renal function in voluntary renal donors by multidetector computed tomography and nuclear renography: How well do they correlate? SA J Radiol. 2021;25(1):2009.
6. Zhou Z, Jardine MJ, Li Q, Neuen BL, Cannon CP, de Zeeuw D, et al. Effect of SGLT2 Inhibitors on Stroke and Atrial Fibrillation in Diabetic Kidney Disease: Results From the CREDENCE Trial and Meta-Analysis. Stroke. 2021 May;52(5):1545-56.
7. Prasad N, Yadav AK, Kundu M, Sethi J, Jaryal A, Sircar D, et al. Prescription Practices in Patients With Mild to Moderate CKD in India. Kidney Int Rep. 2021 Sep;6(9):2455-62.
8. Patel MR, Kushwaha RS, Behera M, Bhadauria DS, Yachha M, Kaul A, et al. Aftermath of fortnightly universal testing for severe acute respiratory corona virus-2 infection in maintenance hemodialysis patients. Semin Dial. 2021 Sep;34(5):338-46.
9. Prasad N, Behera MR, Bhatt M, Agarwal SK, Gopalakrishnan N, Fernando E, et al. Outcomes of symptomatic coronavirus disease 19 in maintenance hemodialysis patient in India. Semin Dial. 2021 Sep;34(5):360-7.
10. John O, Gummudi B, Jha A, Gopalakrishnan N, Kalra OP, Kaur P, et al. Chronic Kidney Disease of Unknown Etiology in India: What Do We Know and Where We Need to Go. Kidney Int Rep. 2021 Nov;6(11):2743-51.
11. Yachha, Monika; Sharma, Raj Kumar,*; Mehrotra, Sonia; Prasad, Narayan; Gupta, Amit; Bhadauria, Dharmendra S.; Kaul, Anupama. A Comparative Analysis of Live-Related ABO-Incompatible and ABO-Compatible Renal Transplantation: Effect of Vitamin D Deficiency on Antibody-Mediated Rejection - A Retrospective Observational Study. Indian Journal of Transplantation. 2021;15(4):300-6.

12. Kute VB, Agarwal SK, Prakash J, Guleria S, Shroff S, Sharma A, et al. NOTTO COVID-19 Vaccine Guidelines for Transplant Recipients. *Indian J Nephrol.* 2021;31(2):89–91.
13. Gupta A, Agrawal V, Kaul A, Verma R, Jain M, Prasad N, et al. Etiological Spectrum and Clinical Features in 215 Patients of Crescentic Glomerulonephritis: Is it Different in India? *Indian J Nephrol.* 2021; 31(2):157–62.
14. Prasad N, Patel MR, Kushwaha R, Behera MR, Yachcha M, Kaul A, et al. Modalities of Diagnosis and Management of Peritoneal Dialysis-related Hydrothorax Including Videothoracoscopy-assisted Repair: A Single-center Experience. *Indian J Nephrol.* 2021;31(6):574–9.
15. Yadav, Poonam; Yadava, Kamlesh,; Tandon, Neeraj; Prasad, Narayan; Dhole, T. N. Cytomegalovirus disease in post-renal transplant patients: An Indian experience - A prospective observational study. *Indian Journal of Transplantation.* 2021;15(1):29–33.
16. AG Gokulnath, Vijay Kher, Manisha Sahay, Umesh Khanna, Alan Almeida, TarunJeloka, Manish Rathi, Sanjay Maitra, Arpita Roy Choudhury, Narayan Prasad and Kaushik Mandal. Consensus on the use of DPP4 Inhibitors and SGLT2 Inhibitors in T2DM with Chronic Kidney Disease-from Indian Context. *Diabetes Obes Int J.* 2021;6(2):1–14.

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, andDrAmitGuptaEditorDrGeorgi Abraham
4. Anita Saxena and Amit Gupta Nutrition in postrenal transplant patientEditorDrGeorgi Abraham and DrAnushaHand book of renal transplantation in developing countries
5. Dr. D.S. Bhadauria - Chapters in India Point of Care tool by Elsevier 2021
6. M.R. Patel. A Chronic Kidney Disease 5 Patient in Peritoneal Dialysis with Ultrafiltration Failure
7. Visiting Scientists- None
8. Department highlights

Advanced Renal & Transplant Centre- Bytheendof 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 advancedtransplantCentre will have 6 operating theatres, which will enable the capacity with 2-3 transplants per day. The department intends to increase the number of transplants mainly through increasing deceased donors and swapping transplants.

New initiatives

Critical Care Nephrology-Department is planning to increase no of beds from 8 to 24 in next 5 years.

Intervention in Nephrology - Department is planning to have one more fluoroscope and DSA to facilitate intervention nephrology programme.


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Division of Pediatric Nephrology - Department proposes to start pediatric nephrology unit in next 5 year.

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.

Advance Centre For Prevention of Malnutrition In Chronic Kidney Disease

Patient Education and Training - Department planning to improve patient education and training through

- a. Counsellor
- b. Medical Social Worker
- c. Psychologist
- d. Renal Nutritionist (by strengthening existing one)
- e. Audio-visual programme



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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
2. Dr. Golla Nagesh Babu, M.Sc (Biochemistry), Ph.D (Life Sciences)	Professor
3. Dr. Sanjeev Jha, MD (Medicine), DM (Neurology)	Professor
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

Activities

Awards and Recognitions

Dr. Jayantee Kalita :

- Among Top 2% scientists of the world in the list of top researchers: Stanford University November 2021.
- Delivered the “Ninth Anisya Vasanth Oration” in NIMHANS Bangalore in November 2021.

Invited sessions and chairpersons/lectures for Conferences: 2021

Name of faculty and Session

Dr. Jayantee Kalita

- International Parkinson and movement disorder Society
- American Neurological Association.
- Indian Academy of Neurology Master class ,XIth- Applied anatomy and clinical methods.
- European Academy of Neurology

Dr. Vimal Kumar Paliwal

- Digital Neuro otology Workshop - Persistent Positional Perceptual Dizziness/Functional Dizziness
- COVID-19 Training Module - 9- Neurological Complications of Covid-19-Doctors training program

Dr. Vinita Elizabeth Mani

- 27th Annual Conference of UP-UK Neuroscience Society,
- Gorakhpur Mahotsav -Importance of preventive care in health sector
- Society of Renal Nutrition & Metabolism



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- Monsoon Summit 2021-International Neurology Update (Virtual Conference)

Dr. Ruchika Tandon

- XXV World Congress of Neurology

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

- American Academy of Neurology
- Indian Stroke Association

Dr. Ruchika Tandon

- Movement Disorder Society
- Indian Academy of Neurology
- UP- Association of Physicians

Teaching Workshops/ CME's organized 2021

- Clinical neurophysiology Skill Development workshop

Service

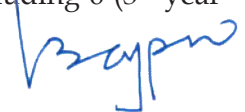
Year-wise available clinical data (last three years 2019,2020,2021) for department of Neurology

S.No	Parameters	2019	2020	2021
1.	Number of New patients in OPD	20716	3605	7832
2.	Number of Old/ Follow-up patients in OPD	48406	11111	12616
3.	Total patients in OPD	69122	14716	20448
4.	Total number of patients admitted (IPD)	1750	724	1230
5.	Total number of Neurophysiology Procedures done			
	• EEG	1567	540	1267
	• EMG / NCV	2160	618	1239
	• EPs	418	102	237

Training

At present, there are 18 senior residents enrolled in DM Neurology program including 6 (3rd year DM residents), 6 (2nd year DM residents) & 6 (1st year DM residents)

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



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

Research projects

Research in progress

Funding agency, Name of project, Investigators

1. 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
2. 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. Jayante Kalita
3. UPCST - A study of neurologic Wilson disease with reference to cognitive and neuropsychiatric abnormality., PI: Dr. Jayantee Kalita
4. 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
5. Gennova Biopharmaceuticals Ltd. - Clinical Trial to assess the efficacy and safety of TNF-TPA in Acute Ischemic stroke. **Funding**-PI: Dr. Jayantee Kalita
6. Intramural funded - Project on Music Therapy in Parkinsonism. PI: Dr. Ruchika Tandon
7. ICMR - Functional Characterization of rare founder alleles causing neuro developmental disorders for biomarker identification and community genetics surveillance. PI: Dr. Anshika Srivastava CO-PI

Dr. Ruchika Tandon

Publications

1. 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.
2. Warriar, Siddharth & Arora, Anka & Jha, Sanjeev & Paliwal, Vimal. (2021). Cerebral Venous Thrombosis in a Young Athlete—an Unusual but Preventable Cause. *SN Comprehensive Clinical Medicine.* 3. 10.1007/s42399-020-00664-8.
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Chapter(s) in Book(s) 2021

1. Chapter on Tuberculous meningitis: Kalita J, Misra UK. *Postgraduate Medicine*. 2021. Jaypee Brothers Medical Publishers

Books

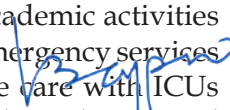
1. Consequences of Nutritional Disorders Misra UK, Kalita J. *Neurological* CRC Press; 1st edition (2021)

Visiting Professors

1. Faculty - Dr M J Brodie, U. K.- uncontrolled epilepsy - optimising medical management
Epilepsy awareness program at international epilepsy awareness month - February, 2021

Departmental Highlights

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


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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.

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.

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.

Our faculty have taken care of COVID-19 patients admitted in the ICU, HDU and Triage facilities of the Rajdhani Covid hospital, besides being in the forefront of roster making and triaging of patients there.

New Initiatives

1. 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.
2. We have upgraded our wards which were already running with ventilators to ICUs and HDUs.



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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 Chunnial, MS, MCh	Associate Professor
9. Dr. Ravi Sankar, MS	Associate Professor
10. Dr. Kamlesh Singh Bhaisora*, MS, MCh	Associate Professor
11. Dr. Pawan Kumar Verma*, MS, MCh	Associate Professor
12. Dr. Ved Prakash Maurya*, MS, MCh	Associate Professor

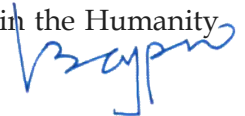
*Apex Trauma Center faculty: the awards, recognitions and invites of the faculty is included in the ATC annual report.

Activities

Awards And Recognitions

Dr. Raj Kumar

- Received Award of Commonwealth innovation forum-2021 on 01/06/2021 on innovation of RNB for Covid (Z).
- Innovator in Medical Terminology Award 2021 by Dr. Ambedkar International Mission (AIM), Japan on 12.06.2021.
- International Excellence Service Award 2021 of Babu Jagjivan Ram Kala Sanskriti & Sahitya Academy given by Former Speaker Lok Sabha Miss Meira Kumar for his remarkable contribution to the upliftment of the downtrodden people of India on date 14 December 2021 at Rajendra Bhawan, New Delhi.
- Recognition as International Ambassador of Peace by World Literary Forum for Peace and Human Rights- WLFPH (Registered with sustainable Development Goal (SDG)- UN-DESA) in January 2021.
- Manvadhikar Media, Lucknow, Uttar Pradesh awarded certificate of Corona Yodhha to Fight against Novel Corona (COVID-19), 2021.
- Public Rights Association, Lucknow, Uttar Pradesh awarded certificate of Corona Yodhha, 2021.
- Arogya Bharati, Lucknow, Uttar Pradesh awarded certificate in appreciation of invention of Allovedic medicine RNB (Raj NirwanVati) and for remarkable contribution in the Humanity and historic efforts towards the prevention of (COVID-19), 2021.



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- Dr. Ambedkar Rastriya Sewa Samman Award by Eminent senior leaders at National Conference of BDSA at Buradee Delhi on 13th March 2021.
- Exemplary Indian Educator Award (2021) has been award by Allen House Colleges, Kanpur on the ceremony of Gurunaman on 5th September 2021.

Dr. Sanjay Behari

- Member, world federation of neurosurgical societies subcommittee for deciding the best publication award of the year 2021.
- Course co-ordinator for India neurological society for webinars, 2021.
- Manuscript selected as “editor’s choice article” for the march issue of Neurospine 2021.

Dr. Arun Kumar Srivastava

- Best Research paper Award; 2nd Research Day, SGPGIMS.
- Third best paper award UPUK NEUROCON.
- Best paper award NSSICON.

Dr. Amit Kumar Keshri

- Fellowship: Foundation of Head and Neck Oncology Travel Fellowship 2021.
- President: Association of Otolaryngologist of India, UP Chapter.
- Governing Body Member: Association of Otolaryngologists of India.
- National Trainer for ENT Care: National Health Systems Resource, Government of India.
- Member: UP state Selection Committee for Prizes for Work in area of Disabilities.
- Member: Post COVID Mucormycosis State Advisory Committee.
- WHO World Hearing Day Report: Contribution from India.

Dr. Kuntal Kanti Das

- Section Editor, Comprehensive Neurosurgery, a book published by Bohr publishers.
- Selected as national executive, Indian Society of Peripheral Nerve Surgery.

Dr. Jayesh SardharaChunnial

- Appointed as the editor of “Journal of Spine Surgery”.
- Appointed as the co-ordinator for the minimally invasive spine surgery line and cadaveric workshop in BNA preconference workshop, Mumbai.

Dr. Ashutosh Kumar

- Awarded Young Neurosurgeon Award at World Federation of Skull Base Society (WFSBS), 2021.
- Awarded best paper award at UPUK NEUROCON, 2021.

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

- 7th NERUOENDOCON 2021, Hyderabad, 2nd- 4th April 2021.
- SKULLBASE CON 2021, AIIMS, Jodhpur, 22nd- 23rd October 2021.



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Dr. Arun Kumar Srivastava

- SBSSI, 22nd-23rd October; AIIMS- Jodhpur (online).
- NEUROVASCON, September 2021; PGI, Chandigarh (online).

Dr. Anant Mehrotra

- NEUROVASCON, October 2021.
- SKULLBASECON, October 2021.
- NSICON, December 2021 (virtual).
- NSI Webinar, March 2022.
- NSICON, December 2021.
- NEUROVASCON, October 2021.
- SKULLBASECON, October 2021.
- NSSICON, February 2021.
- NSICON December 2021.

Dr. Kuntal Kanti Das

- National Board of Examination.
- NSI Journal Club.
- SGPGI spine course, 27th April 2021.
- NSICON (Virtual- December 2021).
- SKULLBASECON-Jodhpur, 2021.
- NEUROVASCON-2021, Chandigarh.

Dr. Jayesh SardharaChunnilal

- BNA preconference workshop, JJ Hospital, Mumbai. April 2021.
- MISSAB surgical symposium, virtual.
- NSICON, December 2021.
- NSSA conference, July 2021.
- NEUROENDOCON, April 2021.

Dr. Ravi Sankar

- FHNO, 2021, 10-12 December 2021.

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.



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- 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, N.D.
- 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 (NSSI).

Dr. Sanjay Behari

- 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 Association of Spinal Surgeons of India.
- Permanent Member of ACNS, Japan.
- Life member of National Trauma Society of India.
- Life member of Skull Base Society of India.
- Life member of Asian Congress of Neurological Surgeons of India.
- Life member of Asian Congress of Neurological Surgeons, USA.
- Life member of Association of Fellows of the Union International Against Cancer (UICC), Geneva, Switzerland.
- International member of American Association of Neurological Surgeons, USA.
- Associate member of The Association of British Scholars (ABS).
- Alumni, Commonwealth Scholars, and Fellows.
- Member, AO spine international.
- Member, National Academy of Medical Sciences.

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.
- Member of International Society for 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.



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Dr. Anant Mehrotra

- Life member of Neurological Society of India.
- Life member of Skull Base Surgeons Society of India.
- Life member of Minimally Invasive Spine Surgeon Association of Bharat.
- 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. Jayesh SardharaChunnilal

- Life member of Neurological Society of India.
- Life member of Neurosurgical Society of India.
- Life member of Neurological Spine Surgeon Association (NSSA).
- Life member of MISSAB (Minimally Invasive Spine Surgeon Association of Bharat).
- Life member of UPUK-Neuroscience Society.

Dr. Ravi Sankar

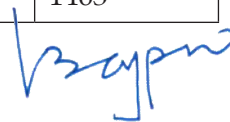
- Life member of American Academy of Otolaryngology-Head and Neck Surgery.
- Life member of American Neurotology society.
- Life member of Skull Base Surgery Society of India.
- Life member of The Association of Otolaryngologists of India.
- Life member of Neuro-otological and Equilibrium Society of India.

Teaching Workshops/ CME's organized

1. Comprehensive spine workshop 2021.
2. 3th Dr DK Chhabra oration and Dr VK Jain oration 2021.

Services

		2019	2020	2021
OPD registrations	New registrations	38837	4865	6212
	Follow up		13303	20989
Surgical procedures	Major surgeries	2802	1088	1863
	Minor surgeries		356	362
In-Patients		1679	1238	1463



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Training

At present there are 14 senior residents enrolled in MCh neurosurgery program, with 3 post-doctoral fellows. There are 3 senior residents under neuro-otology with two residents enrolled for Post-Doctoral Certificate Course.

Number of students appeared in the final year examination (PG): 3

Number of students who passed in final year examination (PG):3

Research Projects

Completed:

1. **Project:** Evaluation of BRAF gene status in gliomas, **PI:** Dr Awadhesh Kumar Jaiswal, Funding, SGPGIMS, Lucknow, **Status:** Published in Neurology and Neurobiology 2021 Vol 4(2), P 2-7, **Summary report:** Forty cases of glioma were studied for KIAA1549-BRAF gene fusion by reverse transcription-PCR (RT-PCR). Overall, KIAA1549-BRAF gene fusion was found in 22% (9/40) cases of glioma. Children had higher KIAA1549-BRAF fusion (72%; 8/11) as compared to adults (10%; 3/29) and this difference was statistically significant. Cerebellar location of tumor was significantly associated with KIAA1549-BRAF fusion. KIAA1549-BRAF fusion was highest in pilocytic astrocytoma (89%), and this difference was statistically significant. Statistically significant difference was also noted between KIAA1549-BRAF fusion expression and WHO grade I glioma
2. **Project:** Genetic Basis of Boney Craniovertebral Junction Anomalies: Evaluation of MEOX1, GDF3 And GDF6 Genes as The Putative Pathological Foci in Humans, **PI:** Dr Jayesh Sardhara, Funding, SGPGIMS, Lucknow, **Status:** completed **Summary report:** Sanger sequencing for all coding exons and exon-intron boundaries of MEOX1, GDF3 and GDF6 was done. Sequence chromatogram was visualized using FinchTV 1.4 software. Clinically significant likely pathogenic/ pathogenic variation was not found in any of the patients.

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 Randomised 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 concensus and its application in molecular subgroup-based risk adjusted therapy.
Funding: SGPGI. (PI: Dr Kamlesh Singh Bhaisora)



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Publications

Publications in indexed journals (Articles)

1. Sardhara J, Behari S, Singh S, Srivastava AK, Chauhan G, Lal H, Das KK, Bhaisora KS, Mehrotra A, Mishra P, Jaiswal AK. A Universal Craniometric Index for Establishing the Diagnosis of Basilar Invagination. *Neurospine*. 2021 Mar; 18(1): 206–216.
2. Mehrotra A, Singh S, Kanjilal S, Attri G, Rangari K, Paliwal VK, Mani V, Verma PK, Maurya VP, Sardhara J, Bhaisora KS, Das KK, Srivastava AK, Jaiswal AK, Behari S. Resistant Temporal Lobe Epilepsy: Initial Steps into a Bigger Epilepsy Surgery Program. *J Neurosci Rural Pract*. 2021 Jan; 12(1):193–196.
3. Rangari K, Das KK, Singh S, Kumar KG, Bhaisora KS, Sardhara J, Srivastava AK, Jaiswal AK, Behari S. Type I Chiari malformation without bony instability: Assessment of different surgical procedures and outcomes in 73 patients. *Neurospine* 2021(18) 126-138.
4. Verma PK, Singh A, Dixit P, Das KK, Mehrotra A, Jaiswal S, Behari S, Jaiswal AK. Endoscopic keyhole approach for intracranial epidermoid. *J Neurosci Rural Pract* 2021(12): 614-622.
5. Jaiswal AK, Agrawal S, Jaiswal S, Das KK, Behari S, Tiwari S, Godbole MM, Mishra P, Evaluation of BRAF gene status in glioma. *Neurology and Neurobiology* 2021(4): 211-216.
6. Singh S, Deora H, Neyaz A, Das KK, Mehrotra A, Srivastava AK, Behari S, Jaiswal AK, Jaiswal S. Trends in clinic-epidemiology profile of surgically operated glioma patients in a tertiary care centre over 12 years: through the looking glass. *Egyptian J Neurosurg* 2021; 36:1-8.
7. Kumar A, Mehrotra A, Verma PK, Das KK, Jaiswal AK, Behari S. Anterior cervical meningocele with craniaovertebral junction instability-A case report and literature review. *J Craniovertebr Junction Spine* 2021; 12: 440-444.
8. Das KK, Jaiswal AK, Verma PK, Mehrotra A. Commentary: Endoscopic Endonasal Excision of an Optic Pathway Cavernous Malformation: Technical Case Report. *Operative Neurosurgery (Hagerstown)*. 2021 May 20:opab158.
9. Das KK, Gosal JS, Ashish K, Gandhi A, Jaiswal AK, Behari S. Trigeminal Neuralgia from an Arteriovenous Malformation of the Trigeminal Root Entry Zone with a Flow-Related Feeding Artery Aneurysm: The Role of a Combined Endovascular and “Tailored” Surgical Treatment. *Neurol India*. 2021 May-Jun;69(3):744-747.
10. Das KK, Nandan M, Bhaisora KS, Srivastava AK, Jaiswal AK, Behari S. Modified Retromastoid Approach and Clipping of “High-Riding” VA-PICA Junction Aneurysm: An Operative Video. *Neurol India*. 2021 Jul-Aug;69(4):833-836.
11. Jaiswal AK, Das KK, Mehrotra A, Verma PK. Suprasellar Meningiomas: The Quest for an Ideal Minimally Invasive Surgical Approach. *Neurol India*. 2021 May-Jun;69(3):636-637.
12. Kumar A, Maurya VP, Kanjilal S, Bhaisora KS, Sardhara J, Das KK, Mehrotra A, Srivastava AK, Jaiswal AK, Behari S. Clinicoradiological Features and Treatment Outcome of Supratentorial Intraparenchymal Epidermoid Cyst: A Report of Five Cases and Literature Review. *J Neurosci Rural Pract*. 2021 Jul;12(3):571-580.
13. Srivastava AK, Mishra S, Kumar A, Nangarwal B, Das KK, Bhaisora KS, Verma P, Jaiswal AK, Behari S. Treading Toward Anterolateral Skull Base by Unlocking the Frontotemporal Dural Fold Along with Extradural Clinoidectomy: Translation from A Cadaver to Clinical Scenario. *Neurol India*. 2021 Jul-Aug;69(4):829-832.
14. Dikshit P, Sharma A, Mehrotra A, Verma PK, Das KK, Jaiswal AK. “Extra-cranial proximal pica aneurysm - a rare and surreptitious cause of posterior fossa SAH: case report and review of literature”. *Br J Neurosurg*. 2021 Sep 15:1-5.

15. Singh S, Mehrotra A, Kanjilal S, Paliwal VK. Effect of seizure timing on long-term survival in patients with brain tumour. *Epilepsy Behav.* 2021 Apr;117:107566.
16. Kumar A, Mehrotra A, Verma PK, Das KK, Jaiswal AK, Behari S. Anterior cervical meningocele with craniovertebral junction instability-A case report and literature review. *J Craniovertebr Junction Spine* 2021 Oct-Dec;12(4):440-4.
17. Dikshit P, Sharma A, Mehrotra A, Verma PK, Das KK, Jaiswal AK. Extracranial proximal PICA aneurysm- a rare and surreptitious cause of posterior fossa SAH: case report and review of literature. *Br J Neurosurg* 2021 Sep; 1-5.
18. Nangarwal B, Singh S, Sinha S, Bhaisora KS, Sardhara J, Das KK, Mehrotra A, Srivastava AK, Desh S, Jaiswal AK, Behari S. How important is to know the psychological performance in an operated child of meningioma? Devil is in the details. *J PediatrNeurosci.* 2021 Apr-Jun;16(2):125-30.
19. Raiyani V, Singh S, Sardhara J, Mehrotra A, Mani V, Paliwal VK, Pal L, Kumar A, Dikshit P, Maurya VP, Verma PK, Behari S. Seizure outcome after lesionectomy with or without concomitant anteromedial temporal lobectomy for Low grade glioma of medial temporal lobe. *Asian J Neurosurg* 2021 Sep;16(3):518-24.
20. Kumar A, Maurya VP, Kanjilal S, Bhaisora KS, Sardhar J, Das KK, Mehrotra A, Srivastava AK, Jaiswal AK, Behari S. Clinicoradiological features and treatment outcome of supratentorial intraparenchymal epidermoid cyst: A report of five cases and literature review. *J Neurosci Rural Pract.* 2021 Jul;12(3):571-80.
21. Verma PK, Nangarwal B, Verma J, Dwivedi V, Mehrotra A, Das KK, Maurya VP, Bhaisora KS, Singh J, Sardhara J, Srivastava AK, Behari S, Jaiswal S, Jaiswal AK. A clinico-pathological and neuro-radiological study of angiomatous meningioma: Aggressive look with benign behaviour. *J Clin Neurosci.* 2021;83:43-48.
22. Singh S, Srivastava AK, Sardhara J, Bhaisora KS, Das KK, Mehrotra A, Jaiswal AK, Panigrahi MK, Behari S. A Prospective, Single-Blinded, Bicentric Study, and Literature Review to Assess the Need of C2-Ganglion Preservation - SAVIOUR's Criteria. *Neurospine.* 2021 Mar; 18(1): 87-95.
23. Singh S, Srivastava AK, A Baranwal, Ankur Bhatnagar, Kuntal Kanti Das, Sushila Jaiswal, Behari S. Efficacy Of Silicon Conduit in the Rat Sciatic Nerve Repair Model: Journey of a Thousand miles. *Neurology India; Volume 69; Issue 2; March -April 2021.*
24. Rangari K, Das KK, Singh S, Kumar KG, Bhaisora KS, Sardhara J, Mehrotra A, Srivastava AK, Jaiswal AK, Behari S. Type I Chiari Malformation Without Concomitant Bony Instability: Assessment of Different Surgical Procedures and Outcomes in 73 Patients. *Neurospine.* 2021 Mar;18(1):126-138.
25. Sardhara J, Behari S, Srivastava AK; Reply to Commentary on "A Universal Craniometric Index for Establishing the Diagnosis of Basilar Invagination". *Neurospine.* 2021 Sep;18(3):646-647.
26. Bhawan N, Bhaisora K, Sardhara J, Behari S, Srivastava AK et al. An institutional experience and literature review of iatrogenic major vascular injury: a proposal of algorithm. *Neurology India* 2021 Dec.
27. Sardhara J, Kumar A, Srivastava AK, Nangarwal B, Behari S. Gravity Assisted Retraction Less OccipitoTranstentorial and Trans-Splenic Approach for Posterior Third Ventricular Dermoid. *Neurol India* 2021;69:1557-9.
28. Ashutosh K, Sardhara J, Srivastava A, Behari S. Primary Osseous Solitary Fibrous Tumor of C3 Vertebral Body: A Rare Case Report and Literature Review. *Journal of spine surgery* Oct 2021.

29. Maurya VP, Singh Y, Srivastava AK, Das KK, Bhaisora KS, Sardhara J, Behari S. Spinal Dermoid and Epidermoid Cyst: An Institutional Experience and Clinical Insight into the Neural Tube Closure Models. *J Neurosci Rural Pract.* 2021 Jul;12(3):495-503.
30. Das KK, Gosal JS, Khatri D, Srivastava AK. Letter to the Editor. Outcome prediction and assessment after surgery in CM-I: there is more to it than meets the eye. *J Neurosurg.* 2021 Oct 15:1-2.
31. Singh S, Srivastava AK, Baranwal AK, Bhatnagar A, Das KK, Jaiswal S, Behari S. Efficacy of Silicone Conduit in the Rat Sciatic Nerve Repair Model: Journey of a Thousand Miles. *Neurol India.* 2021;69(2):318-325.
32. Das KK, Gosal JS, Khatri D, Srivastava AK. Letter to the Editor. Outcome prediction and assessment after surgery in CM-I: there is more to it than meets the eye. *J Neurosurg.* 2021; 15:1-2.
33. Singh MK, Haldar R, Kannaujia AK, Das KK. Iatrogenic Lagophthalmos or Lid Lag. An Uncommon Occurrence Following Scalp Block. *Neurol India.* 2021 Mar-Apr;69(2):526-527.
34. Kumar A, Mehrotra A, Verma PK, Das KK, Jaiswal AK, Behari S. Anterior cervical meningocele with craniovertebral junction instability - A case report and literature review. *J Craniovertebr Junction Spine.* 2021 Oct-Dec;12(4):440-44.
35. Kumar A, Maurya VP, Kanjilal S, Bhaisora KS, Sardhara J, Das KK, Mehrotra A, Srivastava AK, Jaiswal AK, Behari S. Clinico radiological Features and Treatment Outcome of Supratentorial Intraparenchymal Epidermoid Cyst: A Report of Five Cases and Literature Review. *J Neurosci Rural Pract.* 2021 Jul; 12(3): 571-580.
36. Kumar A, Maurya VP, Singh Y, Behari S. Recurrence of symptoms on long- term follow-up following subtotal resection of ruptured intraventricular dermoid. *Neurol India* 2021;69(4): 1091-93.
37. Nandan M, Patnaik A, Sahu RN, Dikshit P, Maurya VP, Das KK, Kumar R Unexpected Prolonged Survival in a Case of Cerebellar GBM: An Interesting Case with Literature Review *Indian J Neurosurg.*
38. Nandan M, Patnaik A, Sahu RN, Singh Y, Maurya VP, Das KK, Behari S Rosette-Forming Glioneuronal Tumor at Septum Pellucidum: Insights Gained from a Common Tumor at Rare Location, *Indian J Neurosurg.*

Book Chapters:

1. Mehrotra A, Kumar A, Singh A, Das KK, Jaiswal AK. Endoscopic interlaminar approach for tethered cord syndrome. In: YR Yadav eds. *Endoscopic Brain and Spine Surgery.* Jaypee Publishers 2021. p455-62.
2. Jaiswal AK, Das KK, Mehrotra A. Endoscopic endonasal approaches to orbital tumors. In: YR Yadav eds. *Endoscopic Brain and Spine Surgery.* Jaypee Publishers 2021. p176-83.
3. Das KK, Singh A, Nandan, Insular Glioma, Chapter in *Progress in Clinical Neurosciences (Proceedings of CME, NSICON-2021).*
4. Dikshit P, Srivastava AK, Bhaisora KS, Maurya VP, Mandal K, Behari S. Syndromic craniosynostosis. In: Turgut M et al. eds. *The Sutures of the Skull.* Switzerland AG: Springer Nature; 2021: 261-286.

Visiting Professor

None



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Departmental Highlights

1. The department has extended further by increasing the number of MCh residents from an annual of four to six seats, and the post-doctoral fellows from four to seven seats.
2. Recently, new postdoctoral fellowship courses have been opened in Neuro critical care, Neuro-traumatology, Neuro-endoscopy in addition to the ongoing fellowships on Neurosurgical oncology, Paediatric neurosurgery, Skull base and Spine surgery.

New Initiatives

1. **Epilepsy and functional neurosurgery-** Hippocampectomy, corpus callosotomy and hemispherotomy. Deep brain stimulation (DBS) for Parkinson's disease is some of the recent procedures being performed in the department. The program of stereotactic biopsy as a day care procedure is also on the roll and is being very helpful for the patients with obscure neuropathological diagnosis.
2. **Peripheral nerve surgery-** Apart from routine procedures, we have started and published a few novel surgical techniques. These procedures in peripheral nerve surgery are found to be very helpful and are bringing out drastic results in this relatively non alluring subspecialty of Neurosurgery.
3. **Neuro-vascular intervention-** Complicated cerebrovascular bypass procedures, endovascular services including diagnostic digital subtraction angiography (DSA) facility are being provided for cerebrovascular disease patients and complex skull base tumors with major vascular encasements.
4. **Pediatric Neurosurgery-** Advanced craniosynostosis surgery, complex spinal dysraphism, multi compartmental craniopharyngioma surgery, pediatric kyphoscoliosis and complex pediatric craniovertebral junction surgery are being done routinely.



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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:

- Homi Bhabha Memorial Oration Award on “Nuclear medicine Therapy: Way Forward” for Society of Nuclear medicine India, delivered on 16th Dec.2021,NIMS,Hyderabad. By Dr. P K 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. S. Gambhir

- Invited talk at SNMICON 2021 (Annual meeting of the Society of Nuclear Medicine of India) at Hyderabad, India via online mode.

Dr. M. Ora

- Role of PET/CT in Multiple Myeloma Imaging: Indian Myeloma Congress 2021 23rd April-25th April 2021
- Gastrointestinal Scintigraphy: ICRI/IRIA 26th June 2021.

Dr. Amitabh Arya

- Master classes on research skills in higher nursing education 23-25 Feb 2021, Semey Medical University, Semey, Republic of Kazakhstan Invited faculty for talk on the topic –Teaching Research Skills for Undergraduate Students.



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Membership of Societies

Membership of professional bodies funded by Institute: None.

Teaching Workshops/ CME's organized 2021: non

Service

Patient care Services

	2019	2020	2021
OPD patients	5100	1282	2462
Gamma Scan	13371	2735	7967
PET/CT scan	2830	1254	2031
Patient Admitted	201	110	262
High dose radionuclide therapies	296	101	251
Low dose radionuclide therapies	335	96	190

Training

1. MD Program: at present total 15 residents are enrolled in MD programs
2. MSc Nuclear Medicine technology: total 6 students are enrolled in 2 years MSc

Number of students appeared in the final year examination (PG) :3

Number of students who passed in final year examination (PG): 3

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.
4. IAEA, Vienna, The production of Zirconium-89 and the Development of Zr-89 Radio pharmaceuticals." Dr. S. Gambhir, Dr. Manish Dixit.
5. DHR-Grant in Aid -New Delhi, Diagnostic and therapeutic application of the ⁶⁴CuCl₂ 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.


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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. Saini VK, Hassan A, Singh AK, Ora M, Gambhir S. Port-Site Metastases in Incidentally Detected Carcinoma Gall Bladder: Role of 18F-FDG PET/CT and Patient Outcome. *Journal of Gastrointestinal Cancer*. 2022;1-6.
3. Soni N, Ora M, Aher PY, Mishra P, Maheshwarappa RP, Priya S, et al. Role of FDG PET/CT for detection of primary tumor in patients with extracervical metastases from carcinoma of unknown primary. *Clinical Imaging*. 2021;78:262-70.
4. Ora M, Pradhan PK, Garg N, Kheruka S. Routine Stress-Rest Tc-99m MIBI Myocardial Perfusion Scintigraphy Underestimates Ischemia and Viability. *Indian Journal of Clinical Cardiology*. 2021;26324636211013680.
5. Ora M, Nazar AH, Mishra P, Barai S, Arya A, Pradhan PK, et al. Factors predicting the risk of biochemical incomplete response in well-differentiated thyroid cancer after total thyroidectomy. *Nuclear Medicine Communications*. 2021;42(11):1187-94.
6. Ora M, Nazar AH, Mishra P, Barai S, Arya A, Pradhan PK, et al. Clinical outcome of patients with differentiated thyroid cancer and raised antithyroglobulin antibody levels: a retrospective study. *Thyroid Research*. 2021;14(1):1-10.
7. Kumar S, Gupta A, Ora M, Rahman K, Choudhary R, Nityanand S. Prognostic Role of Interim 18-Fluorodeoxyglucose-PET in Diffuse Large B Cell Lymphoma: Experience from a Tertiary Care Centre in North India. *Indian Journal of Hematology and Blood Transfusion*. 2021;1-12.
8. Kheruka SC, Shankar N, Ora M, Gambhir S. Do current radiation safety guidelines allow the safe release of a thyroid cancer patient after high-dose radioiodine therapy? An Indian perspective. *Indian Journal of Nuclear Medicine: IJNM: The Official Journal of the Society of Nuclear Medicine, India*. 2021;36(2):148.
9. Obstructive Index in antenatal unilateral pelviureteric junction obstruction : A novel predictor -- A novel predictor of failure of conservative management Rahul Jena, Amitabh Arya, Kumar Madhavan, Hira Lal, Priyank Yadav, MS Ansari, *Pediatrics International Japan*. 30 Aug. 2021.
10. Fully Automated synthesis of [¹³N]-NH₃ by SHI's HM-18 cyclotron and dedicated module for routine clinical studies: Our Institutional experiences, Akhilesh K Singh, Nitesh Shankar Subhash C Kheruka Sanjay Gambhir, Manish Dixit *Indian J. Nuclear Medicine* on June 16, 2021.

11. Cathy S. Cutler, Elizabeth Bailey, Vijay Kumar, Sally W. Schwarz, Hee-Seung Bom, Jun Hatazawa, Diana Paez, Pilar Orellana, Lizette Louw, Fernando Mut, Hiroki Kato, Arturo Chiti, Savvas Frangos, Frederic Fahey, Gary Dillehay, Seung J. Oh, Dong S. Lee, Sze-Ting Lee, Rodolfo Nunez-Miller, Guru Bandhopadhyaya, Prasanta K. Pradhan, Andrew M. Scott. Global Issues of Radiopharmaceutical Access and Availability: A Nuclear Medicine Global Initiative Project, J Nucl Med. 2021 Mar; 62(3): 422-430.
12. Sanjeev Kumar Bhoi, Suprava Naik, Devendra Gupta, Prasanta K Pradhan, JayanteeKalita, Usha Kant Misra: Recurrent spontaneous cerebrospinal fluid leaks at multiple levels. *Neurlogy India* 2021;69(6); 1828-1830. 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.
13. 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.
14. 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.
15. Soni N, Ora M, Gupta S, Maheshwarappa RP, Priya S, Graham MM. Multimodality imaging in a case of multiple pulmonary hyalinizing granulomas-A decade follow-up. *Lung India: Official Organ of Indian Chest Society*. 2021;38(5):477.
16. Soni N, Ora M. FDG PET/CT in Neurolymphomatosis. *Radiology*. 2021;298(1):36-36.
17. Singh V, Kumar A, Singh P, Ora M, Gambhir S. Extensive Extranodal Involvement in a case of Non-Hodgkin's Lymphoma with sparing of lymph nodes and lymphatic organs. *Asia Oceania Journal of Nuclear Medicine and Biology*. 2021;9(1):39.
18. Saini VK, Mammoottil AE, Ora M, Gambhir S, Nazar AH. Contiguous Multilevel Vertebral Metastasis in Carcinoma Breast Mimicking Spondylodiscitis. *Indian J Nucl Med*. 2021 Sep;36(3):316-8.
19. Saini VK, Mammoottil AE, Nazar AH, Ora M, Gambhir S. Renal cell carcinoma with unusual visceral and cutaneous metastasis. *Indian Journal of Nuclear Medicine*. 2021;36(4):435.
20. Saini VK, Kumar A, Nazar AH, Ora M, Gambhir S. Incidental Diagnosis of Multiple Paragangliomas by Ga-68 DOTANOC Positron Emission Tomography-Computed Tomography. *Asia Ocean J Nucl Med Biol*. 2021 Spring;9(2):173-6.
21. Kalimuthu LM, Singh P, Ora M, Gambhir S. Rib plasmacytoma presenting as progressive muscle weakness. *Indian Journal of Nuclear Medicine: IJNM: The Official Journal of the Society of Nuclear Medicine, India*. 2021;36(1):66.
22. Review article: Soni N, Ora M, Bathla G, Nagaraj C, Boles Ponto LL, Graham MM, et al. Multiparametric magnetic resonance imaging and positron emission tomography findings in neurodegenerative diseases: Current status and future directions. *The Neuroradiology Journal*. 2021;34(4):263-88.
23. Letter to editor: Education And Training Of Nuclear Medicine Technology: Indian Status Saumya Shrivastav, Anjali Shrivastav, Srikanth Saminathan, Manish Dixit, Dristhi. New letter of Molecular Imaging Society of India, Sept 2021 issue.

24. Letter to editor: Metallic Radionuclide exploring the Potential of Biomedical Cyclotron, Anjali Shrivastav, Dr. Manish Dixit Dristhi-New letter of Molecular Imaging Society of India, Sept 2021 issue.
25. Letter to editor: An Introductory outlook on Softwares for Patient Specific Dosimetry, Manish Dixit, Madhulika Mehrotra, Sanjay Gambhir Dristhi-News letter of Molecular Imaging Society of India, Sept 2021 issue

Chapter(s) in Book(s) 2021: 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 ^{18}F -FDG, ^{13}N -Ammonia etc. The ^{68}Ga -DOTANOC PET-CT imaging for neuroendocrine tumors and ^{68}Ga -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 ($\text{Tc}99\text{m}$ -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-ureteric 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 6209 procedure (Gamma scans, PET/CT scans, GFR studies and therapies) were performed by department for the reporting year.

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 radiopharmaceutical synthesizer for in-house production of radiopharmaceutical along with technical institutes of India like Indian Institute of Technology (IIT).

DEPARTMENT OF OPHTHALMOLOGY

STAFF

Name of Faculty Members:

1. Kumudini Sharma, MD	Professor & Head
2. Vikas Kanaujia, MS	Professor
3. Vaibhav Kumar Jain, MD, MAMS	Associate Professor
4. Rachna Agarwal, DNB	Associate Professor
5. Alok Pratap Singh, MS	Associate Professor

Activities:

Kumudini Sharma, MD

- Panelist in a Webinar organized by Indian Neuro-ophthalmological society (INOS) on Neuro-ophthalmology and COVID June 2021.
- Speaker in the Webinar organized by Rewa Medical College, Rewa, MP on Recent advances in Optic Neuritis on 14 August 2021 under Atamnirbhar M.P.
- Guest speakers chairman and Judge in the midterm DOS conference held on 26 September to 3rd October 2021 at Ashoka Hotel new Delhi.
- Presented paper- delayed Neuro-ophthalmic sequela of head injury in SAO-PSOA held in Sri Lanka on 17.10.2021.
- Deliver a lecture on LHON Is there any treatment in INOS 3rd Annual virtual conference on 23-24 Oct. 2021.
- Judge for free paper presentation in 3rd INOS virtual conference on 23.10.2021.
- Chairman in Neuro-Ophthalmology session of Maharashtra Ophthalmology society annual meeting on 30.10.2021.
- Panelist in symposium in annual conference of Ophthalmological Society of Assam held on 21st November 2021.

Vikas Kanaujia, MS, Professor

- Chairperson free paper session in 79th Annual Conference of All India Ophthalmological Society AIOC 2021 virtual meeting, Kolkata 24th to 26th June 2021.
- Member of American society of cataract and refractive surgery (ASCRS)

Vaibhav Kumar Jain, MD, Associate Professor

- Chief Author in Research paper entitled Angle Closure Disease in rural central India: A Hospital based Clinico-epidemiological study presented in 79th Annual Conference of All India Ophthalmological Society at the Glaucoma session on June 24, 2021.
- Chief & presenting Author in Research paper entitled Steroid Induced Glaucoma after Kidney Transplant presented in 79th Annual Conference of All India Ophthalmological Society at the Glaucoma session on June 24, 2021.
- Invited faculty & delivered a talk on Classification of Limbal Stem Cell Deficiency as a co-instructor for an Instruction course "Limbal Stem Cells: Unfolding the Universe" in 79th Annual Conference of All India Ophthalmological Society on June 27, 2021.


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- Invited faculty & delivered a talk on Traumatic Glaucoma in Children: An under addressed grave issue as a co-instructor for an instruction course entitled The horizon of Pediatric Ocular Trauma: An Ophthalmic Psycho-social Panorama in 79th Annual Conference of All India Ophthalmological Society on June 24, 2021.

Rachna Agarwal, DNB, Associate Professor

- Faculty speaker in Annual Delhi Ophthalmology Society Conference 21 Neurovascular neuro-ophthalmology New Delhi 21

Service:

	2020	2021	2022
Total number of patients attended in OPD	10577	16538	27310
Operation Major	367	684	732
Operation Minor	60	153	147

Training: PDCC Neuro-ophthalmology 01 student in each year

Research completed during the year:

Vaibhav Kumar Jain, MD, Associate Professor

- Title: Steroid Induced Glaucoma in Kidney Transplant
Non-funded
- Title: Corneal biomechanical Properties in kidney transplant
Non-funded
- CONCLUSION: CH and IOPcc are altered in kidney transplant patients.
Published in Taiwan J Ophthalmol
- Title: Corneal biomechanics in connective tissue disorders
Non-funded

Conclusion: CH is altered in CTDs which may be an independent risk factor for glaucoma and might underestimate intraocular pressure so CH is an important consideration in patients with CTDs.

Published in Journal of Clinical Ophthalmology and research

Research in Progress:

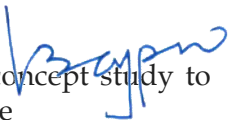
Projects:

Vaibhav Kumar Jain, MD, Associate Professor

- Funding Agency: SGPGI
- Title: Randomized trial of Phacoemulsification versus Laser peripheral iridotomy in Primary angle closure glaucoma

Rachna Agarwal, DNB, Associate Professor

- Title: A phase 2 randomized, double blinded, placebo-controlled, proof of concept study to evaluate the efficacy and safety of VIB49220 in subjects with Sjogren's syndrome


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- Grant amount - Drug trial by Viela Bio Inc.
- Duration and Date of start - Ongoing
- Funding Agency - As Co PI

Alok Pratap Singh, MS, Associate Professor

Typical CMV retinitis in non - HIV partially immunosuppressed patients: A case series - Alok Pratap Singh et al.

Name of sponsoring agency: SGPGIMS, Lucknow

Result arrived at:

All patients were only partially immunosuppressed but presented with typical severe fulminant CMVR. All patients received total 02 intravitreal ganciclovir injections and IV ganciclovir/oral valganciclovir was also given. Complete healing was noted within the treatment period.

1. Funding Agency: SGPGIMS, Lucknow

“To assess and compare microvascular and macrovascular complications in early and late onset type 2 diabetes”

2. Funding Agency: SGPGIMS, Lucknow

“Retinal and choroidal involvement in postrenal transplant associated polycythemia”

Publications**a) Indexed Publications (follow paper citing instructions strictly)**

1. Jain VK, Agarwal R, Shabari Pal, Kaushik J, Sharma K, Kanaujia V. Corneal biomechanical properties in patients with kidney transplant. Taiwan J Ophthalmol 2021;11(2):141-145.
2. Agarwal R, Jain VK, Singh S, Charlotte A, Kanaujia V, Mishra P, Sharma K. Segmented retinal analysis in pituitary adenoma with Chiasmatal compression: A prospective comparative study. Indian J Ophthalmol 2021;69(9):2378-2384.
3. Jain VK, Singh V, Charlotte A, Kanaujia V, Sharma K. Turbulent flow in cavernous sinus lesions: Does it suggest something? Neuro-Ophthalmology 2021;45(5):324-328.
4. Kesarwani D, Jain VK, Agarwal R, Kaushik J, Sharma K. Corneal biomechanics in connective tissue disorders. Journal of Clinical Ophthalmology and Research 2021;9(2):64-66.
5. Kaushik J, Pannu A, Chaitanya VYK, Manumala KL, Jain VK, Chaturvedi P, Kumar A, Singh A, Kochhar D. Effect of complicated ocular surgery on Stress related parameters: A Novel outlook into Surgeon's Health. (As corresponding Author) Indian J Ophthalmol 2021;69(9):2282-2286.
6. Singh A, Kaushik J, Shetty R, Jain VK, Mishra P, Sharma AK. Primary cutaneous angiosarcoma of the eyelid: case report of a rare entity. Indian J Ophthalmol 2021;1(4):727-730.
7. Agarwal R, Jain V, Singh S, et al. Segmented retinal analysis in pituitary adenoma with chiasmatal compression: A prospective comparative study Indian J Ophthalmol. 2021 Sep; 69(9): 2378-2384.
8. Kesarwani D, Jain VK, Agarwal R, Kaushik J, Sharma K. Corneal biomechanics in connective tissue disorders. JCOR. 2021;9(2):64-6.
9. Agarwal R, Pal S, Agarwal A, Mishra P, Jain VK. Patterns, etiology and surgical interventions in cases of epiphora referrals in a tertiary care center. Indian Journal of Clinical and Experimental Ophthalmology. 2020;6(3):429-432.



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10. Agarwal R, Pal S, Sharma K, Jain VK, Mishra P. Fungal infections in the orbit: present scenario in a developing country. Indian Journal of Clinical and Experimental.Ophthalmology.
11. Prasad SN, Singh AP, Kanaujia V, Singh V, Phadke RV, Sharma K. Dural carotid-cavernous fistulas: our experience with endovascular management. Egyptian Journal of Radiology and Nuclear Medicine 2021; 52:155.
- b) Non-Indexed Publications (Give separately, instructions same as above) -
NIL
- c) While citing the papers - NIL
- d) **Chapter(s) in Book(s)**
Vikas Kanaujia, The Pediatric Eye in Siddhart Agarwal editor "**Pediatric Cataract**" For Every Ophthalmologist Springer Nature Singapore Pte Ltd. Publisher April 2021 ISBN 978-981-16-1735-5 page 01-36.
- e) Books - NIL

Visiting Professors: NIL

Awards and Honors: NIL

Departmental Highlights

Initially established in 1987 as a division "Neuro ophthalmology" under the department of neurosurgery, the ophthalmology services were upgraded to a full-fledged department in August 2013. The department PROVIDES SUPERSPECIALITY facilities in various subspecialties of Ophthalmology as Cornea and refractive surgery, Neuro-ophthalmology, Retina, Glaucoma, Orbit and oculoplasty, Paediatric ophthalmology, Retinopathy of prematurity management. The department is dealing with all the patients referred from other department with ocular complications and diseases. We have all the state of art equipments and high end diagnostic and therapeutic machines like which cater to refractive surgery with Relex Smile technique alongwith Corneal Topography, Ocular response analyzer, Aberrometry Specular microscopy, Optical Biometer and high end phacomachines. Fundus camera, Spectral Domain OCT and Lasers for Posterior segment disorders. Vitreo-retinal surgical procedures are now being done by high end equipments. Besides the clinical work the department has involvement in various research projects and also multinational drug trials.

New Initiatives

1. The department is doing all spectrum of refractive surgeries which includes smile surgery and phakic intraocular lens implantation.
2. The department has four wings on a single floor for patient care and management. We have an OPD block, ward, OT and diagnostic block to facilitate all services under single roof

Patents: Nil



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DEPARTMENT OF PATHOLOGY

STAFF

Name of Faculty Members:

1. Manjula Murari, MD	Prof. & Head (superannuated on 30/06/21)
2. Narendra Krishnani, MD	Professor
3. Seema Sharma, MD	Professor & Head (from 01/07/21)
4. Manoj Jain, MD	Professor
5. Lily Pal, MD	Professor
6. Vinita Agrawal, MD	Professor
7. Niraj Kumari, MD	Professor (joined at AIIMS, Raebareli on 4.10.2020 on lien for 2 years)
8. Sushila Jaiswal, MD	Professor
9. Ritu Verma, MD	Professor
10. Ram Nawal Rao, MD	Professor
11. Neha Nigam, MD	Asstt. Professor
12. Pallavi Prasad, MD	Asstt. Professor
13. Raghavendra L, MD	Asstt. Professor

Activities

Honors & Awards

Vinita Agrawal

- On 21st August 2021, during the launch of the third phase of Mission Shakti, awarded 'Mission Shakti Award' by the Honorable Governor of UP, Mrs Anandiben Patel in presence of chief guest Union Minister, Mrs Nirmala Sitaraman, and Chief Minister of UP, Shri Yogi Adityanath.
- Editorial Board Member of an International Journal 'Glomerular Diseases'.
- Editorial Board of Indian Journal of Nephrology.
- Received grant by SERB-DST to conduct a Karyashala workshop in 2021 on 'Transmission Electron Microscopy in Life Sciences: Procedure and Applications' under the 'Accelerate Vigyan' scheme of the Govt. of India.
- Delivered the 'Foundation Day lecture' in the Department of Pathology, KGMC, Lucknow on 'Systematic evaluation and reporting of Renal biopsy', on 2nd December, 2021.
- Appointed Member of the 'RPS Communications and Website Committee and social mediaworking group' of Renal Pathology Society, USA.
- Certificate of Excellence in the Faculty Training Program in Proteomics-'Proteomics Winter School 2021', Organized by Indian Institute Of Technology, Bombay, 8th to 19th Nov. 2021.

Referee/reviewer of a journal/editorial board member

Seema Sharma

- Reviewer for International Journal of Lab Hematology



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Invited sessions and chairperson/ lectures for Conferences 2021

Dr. Vinita Agrawal

- Invited as Faculty in International meeting to present a case in the evening speciality conference (Renal Pathology), at the 110th Annual Meeting of USCAP, (United States and Canadian Academy of Pathology), held from 13th to 18th March, 2021.
- Delivered talk on 'Role of IHC markers in Renal pathology diagnosis' in the Online mid- term conference of IS RTP, held online. Organized by GB Pant Hospital, New Delhi from 30th July to 1st August, 2021.
- Moderator of the session for Case presentations in 'Transplant Pathology' in ISOT 2021, held at Kochi, India from 7th to 10th October, 2021 (hybrid meeting)
- Talk on 'Is it essential to have EM in all kidney biopsies for glomerular diseases?' in the 51st Annual Conference of Indian Society of Nephrology (ISNCON 2021), held in hybrid mode from 9th to 12th December, at Chennai, India.
- Chairperson in Rapid Fire rounds, held at the Annual CME on "International Academy of Pathologists-Indian Division (IAP-ID)" on 18th and 19th September 2021.
- Speaker in training Program on "Bioethics" organized by the Clinical Development Services Agency (CDSA), Translational Health Science & Technology Institute (THSTI), in collaboration with National Biopharma Mission (NBM), Department of Biotechnology, Government of India. Talk on Topic: 'Continuing review Vulnerable population EC communication: Do's & Don't'. Took the lecture in several recurrent training programs held from August 27 - September 17, 2021, 8th October, 26th Nov. and 17th December, 2021.

Dr. Ram Nawal Rao

- Online Faculty speaker on "Symposium Companion Meeting- India -Image Guided FNAC of Abdominal & Pelvic Organs" at 15:30 TO 17:30 PM. "Interesting Cases" in European Congress of Cytology Conference (ECC) at POLLAND 2021.

Dr. Sushila Jaiswal

- Invited faculty in NPSICON 2021, 24-26 September 2021

Membership of international societies.

Dr Seema Sharma: International Society of Lab Hematology

Dr Ram Nawal Rao: International Academy of Cytology at Sydney, Australia

Workshop/ Conference Organized 2021

Virtual Online Workshop On 'Transmission Electron Microscopy in Life Sciences: Procedure and Applications'. 21st to 26 June 2021

Services

Year-wise Patient care Services / Investigations carried in the Department of Pathology (2019-2021)

S.No	Name of Investigation	No. of Tests year wise		
		2019	2020	2021
1	Histopathology including Frozen section	14064	6009	10506
	Cytopathology	9818	4503	6750

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2	Immunohistochemistry (IHC)	2317	1162	1707
3	Electron Microscopy (EM)	365	205	331
4	Urinalysis and Body Fluids	62645	19761	37681
5	Hematology tests	595261	245892	412976
6	Coagulation tests	72979	30664	62825
7	Clinical Chemistry tests	1370073	607530	949595
8	Molecular Pathology	109	79	37
	TOTAL	21,27,631	9,15,805	14,82,408

Training

At present, there are 7 Junior Residents enrolled in M.D Pathology program including 4(3rd year),3 (2nd 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 2021: None

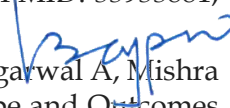
Research in Progress during 2021

1. **SERB-DST.** Circulating microparticles and monocyte activation in IgANephropathy (sanctioned 2019) (PI Dr Vinita Agrawal).
2. **ICMR.** Circulating Endothelial Microparticles and Microvascular injury in Renal Allograft Dysfunction (sanctioned 2019) (PI Dr Vinita Agrawal).
3. **IIT Kanpur** Name of the Project: 'Indigenization and Improvisation of Puncher Gun for Manual Tissue Microarray Construction'. (PI Dr Vinita Agrawal)
4. **ICMR Ad-hoc Research Project.** Metabolomic profile of ampullary carcinoma. (Dr. Raghavendra L) 3years. (Oct 2021).
5. **SGPGI.** Typing of Amyloid in Abdominal Fat Pad Aspirates: An immuno-electron microscopic and proteomic analysis.(PI Vinita Agrawal)

Publications:

Indexed publications

1. Pramanick A, Chakraborti S, Mahata T, Basak M, Das K, Verma SK, Sengar AS, Singh PK, Kumar P, Bhattacharya B, Biswas S, Pal PB, Sarkar S, Agrawal V, Saha S, Nath D, Chatterjee S, Stewart A, Maity B. G protein β 5-ATM complexes drive acetaminophen-induced hepatotoxicity. Redox Biol. 2021 Jul;43:101965. doi: 10.1016/j.redox.2021.101965. Epub 2021 Apr 28. PMID: 33933881; PMCID: PMC8105674.
2. Valiveru RC, Agarwal G, Agrawal V, Mayilvaganan S, Chand G, Mishra A, Agarwal A, Mishra SK, Bhatia E. Hereditary Medullary Thyroid Carcinoma: Genotype, Phenotype and Outcomes


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- in a North Indian Cohort. *World J Surg.* 2021 Jun;45(6):1785-1793. doi: 10.1007/s00268-021-05993-w. Epub 2021 Feb 19. PMID: 33606078.
3. Gupta A, Agrawal V, Kaul A, Verma R, Jain M, Prasad N, Pandey R. Etiological Spectrum and Clinical Features in 215 Patients of Crescentic Glomerulonephritis: Is it Different in India? *Indian J Nephrol.* 2021 Mar-Apr; 31(2):157-162. doi: 10.4103/ijn.IJN_237_19. Epub 2021 Mar 8. PMID: 34267438; PMCID: PMC8240944.
 4. Kumar A, Kanwar J, Bharti N, Agrawal V, Bhatia E, Yadav SC. Low Diagnostic Utility of Overnight High-Dose Dexamethasone Suppression Test in ACTH-Dependent Cushing Syndrome. *Endocrine Practice.* 2021; 27(7):723 DOI:https://doi.org/10.1016/j.eprac.2020.12.011
 5. Ravindranath A, Pai G, Sen Sarma M, Srivastava A, Lal R, Agrawal V, et al. Gastrointestinal Basidiobolomycosis: A Mimic of Lymphoma. *J Pediatr.* 2021; 228: 306-7.
 6. Verma PK, Singh A, Dixit P, Das KK, Mehrotra A, Jaiswal S, Behari S, Jaiswal AK. Endoscopic keyhole approach for intracranial epidermoid. *J Neurosci Rural Pract* 2021; 12: 614-622.
 7. Jaiswal AK, Agrawal S, Jaiswal S, Das KK, Behari S, Tiwari S, Godbole MM, Mishra P, Evaluation of BRAF gene status in glioma. *Neurology and Neurobiology* 2021; 4: 211-216
 8. Singh S, Deora H, Neyaz A, Das KK, Mehrotra A, Srivastava AK, Behari S, Jaiswal AK, Jaiswal S. Trends in clinic-epidemiology profile of surgically operated glioma patients in a tertiary care centre over 12 years: through the looking glass. *Egyptian J Neurosurg* 2021; 36: 1-8
 9. Gupta A, Agrawal V, Kaul A, Verma R, Jain M, Prasad N, Pandey R. Etiological Spectrum and Clinical Features in 215 Patients of Crescentic Glomerulonephritis: Is it Different in India? *Indian J Nephrol.* 2021 Mar-Apr;31(2):157-162. doi: 10.4103/ijn.IJN_237_19. Epub 2021 Mar 8. PMID: 34267438
 10. Sengar P, Verma R, Singh VK, Paliwal VK. Pearls & Oysters: "Quiet Nerve Paralysis" due to Symmetrical Neuropathy in Pure Neuritic Leprosy. *Neurology.* 2021 May 11;96(19):e2451-e2453. doi: 10.1212/WNL.0000000000011880. Epub 2021 Mar 24. PMID: 33762422
 11. Nigam N, Hashim Z, Neyaz Z, Gupta M, Nath A; Inflammatory pseudotumor of the lung with complete resolution; *Lung India*, 2021
 12. Zahir Z, Wani AS, Prasad N, Jain M. Clinicopathological characteristics and predictors of poor outcome in anti-glomerular basement membrane disease - a fifteen year single center experience. *Ren Fail.* 2021
 13. Mathur A, Yadav A, Agrawal V, Jain M, Ghoshal UC. Chylous Ascites Caused by Histoplasmosis. *Tropical gastroenterology*: :42; 2021
 14. Biswas SN, Kulkarni A, Jain M, Chaudhary N, Ghoshal UC. Intra-biliary rupture of hepatic hydatid cyst: An uncommon presentation of a common disease. *Indian J Gastroenterol.* 2021 Aug;40(4):445-447.
 15. Verma V, Israrahmed A, Rao RN. Metastatic clear cell renal cell carcinoma presenting as breast lump: A rare case report. *Diagn Cytopathol.* 2021 Feb 20. doi: 10.1002/dc.24710. Online ahead of print. PMID: 33609330.
 16. Raj N, Kumar A, Rai P and Rao RN. MUC1 Expression in Gastric Adenocarcinomas: Its Prognostic Significance and Clinicopathological Correlation. *Acta Scientific Gastrointestinal Disorders (ISSN: 2582-1091)*4.4 (2021): 20-27.
 17. Gupta A, Mishra SC, Rao RN, Kapoor D. Inflammatory pseudotumor of fallopian tube: A case report with review of literature: Case Report. *IP Archives of Cytology and Histopathology Research* 2021;6(1):64-67.

18. Verma V, Khan A, Rao RN, Nath A and Hashim Z. Role of Endobronchial ultrasound guided transbronchial needle aspiration with cellblocks in diagnosis and subtyping of intrathoracic lesions. *Journal of Cytology*, 2021, 38(3):120-126. doi: 10.4103/JOC.JOC_55_21.
19. Nishith N, Rao RN, Rai P. Cytologic Categorization with Risk Stratification of Endoscopic Ultrasound-Guided Fine Needle Aspiration from Pancreatic Lesions Based on Guidelines of the Papanicolaou Society of Cytopathology: 12-Year Tertiary Care Experience. *DISCOVERIES* 2021, Jul-Sep, 9(3): 1-8. e134 DOI: 10.15190/d.2021.13.

Book Chapter

1. Jaiswal AK, Dixit P, Deviasigamani B, Dwivedi VK, Verma PK, Das KK, Mehrotra A, Jaiswal S. "Orbital Meningioma" in *The Meningioma: PGINS Monograph Series*

Visiting Professor: None

Departmental highlights

1. In the year 2021, Department of Pathology has been able to maintain high-level academics and efficient clinical services, despite the waves and troughs of COVID-19 pandemic.
2. To cater the increasing demand of workload Chemistry analyzer with high through put was installed.
3. Moving towards digital mode for the implementation of next generation pathology in future, the department has organized Virtual Online Workshop On 'Transmission Electron Microscopy in Life Sciences: Procedure and Applications'. It received overwhelming response from all over the country as well as abroad.
4. The department is actively involved in teaching and training of trainees of other DM and MCh departments, Nursing students and MLT technicians.
5. Short term training: 1 (Senior Consultant) from Medanta, Lucknow

New initiatives

1. New facilities have been added in the department for routine patient care services related to molecular pathology few being EGFR mutations and ALK-ROS-MET-RET combine mutation in lung cancer and MGMT promoter methylation status and KIAA1549:BRAF fusion in glial tumors.
2. The diagnostic and immunohistochemical panel has also been expanded with the addition of new antibodies in the IHC Lab: MUM1, CDX2, SATB2 and alpha-inhibin.



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DEPARTMENT OF PEDIATRIC SURGICAL SUPERSPECIALTIES

STAFF

Name of Faculty Members:

- | | |
|---|----------------------|
| 1. Basant Kumar, MS, M.Ch, FIAPS, FICS, FIAGES, FMAS, FAIS, (Took over as Head, w.ef. 3 rd May 2019) | 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:

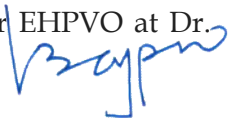
- Fellow of Indian Association of Pediatric Surgeons of India. Awarded by President of “Indian Association of Pediatric Surgeons” in 2021.
- Editorial Board Member of the – SM Journal of Pediatric Surgery (SM Group Publisher), Journal of Surgical Procedures and Technique, Journal of Surgery (Science PG Publisher).
- Executive Member, Central Zone, Association of Pediatric Surgical Oncology (APSO) - IAPS-2020-22.
- Secretary, Society of Pediatric Surgeon of Lucknow (2020-2025).
- Faculty and Session Moderator at Pediatric Surgery Update-2021 at MAMC, New Delhi.
- Examiner /Paper setter for M.Ch. exit Exams and thesis evaluator at Institute/Medical College.

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

- Nominated as Member of Specialist Board of Pediatric Surgery of National Board of Examinations (NBE), MOHFW, Gov. of India.
- Elected as “Executive committee member (Central Zone)” of Pediatric Endoscopic Surgeons of India (PESI) for 2020-2022.
- 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 (Profile of serum Hepatotrophic factors, serum ammonia levels and Quality of life in patients of EHPVO) of Dr.Shreya Tomar, M.Ch. Pediatric Surgery trainee at AIIMS, New Delhi.
- Invited as Visiting Faculty to demonstrate “Leno-renal shunt” procedure for EHPVO at Dr. RML-IMS, Lucknow in September, 2021.



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- Awarded “Best Video Paper” award in Laparoscopic surgery video session for paper titled “Laparoscopic restorative proctocolectomy with ileal J pouch - anal anastomosis by double stapled technique for a case of juvenile polyposis coli” at Indian Association of Pediatric Surgeons (IAPS) Annual Conference (IAPSCON), e-conference, 22-24th October, 2021. (*Corresponding author; Paper was presented by PDF – Dr.Shyamendra Sharma)
- Awarded “Best Paper” award in GI surgery session for paper titled “A tale of two VIPomas: hidden tumors causing physiological havoc” at Indian Association of Pediatric Surgeons (IAPS) Annual Conference (IAPSCON), e-conference, 22-24th October, 2021. (*Corresponding author; Paper was presented by SR – Dr.Pujana Kanneganti)

Invited sessions and chairpersons/lectures for Conferences: 2022

Name of faculty and Session

Dr. Basant Kumar

- Faculty and Session Moderator at Pediatric Surgery Update-2021 at MAMC, New Delhi.
- Invited guest lecture on ‘Stoma Care’ in July 2021 at MLB Medical College, Jahansi.

Dr. Vijai Dutta Upadhyaya

NONE

Dr. Ankur Mandelia

- Invited faculty lecture “Biomarkers in PUV”, Pediatric Urology Update, AIIMS, New Delhi, 23-24 Dec, 2021
- Invited faculty lecture “Optimising working space in laparoscopic pyeloplasty in infants”, Pediatric Urology Update, AIIMS, New Delhi, 23-24 Dec, 2021
- Invited faculty video lecture on “Laparoscopic Adrenalectomy”, 22nd Annual Conference of Indian Association of Endocrine surgeons, 29th -31st October 2021
- Invited faculty guest speaker for webinar “Late second and third trimester anomalies” by Society of Fetal Medicine, 11th Nov 2021

Membership of Societies

Membership of professional bodies funded by Institute

Dr. Basant Kumar

- IPSO (International society of Pediatric surgical Oncology)
- 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)



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Teaching Workshops/ CME's organized 2022

- Pediatric Surgical Week on child safety from 14th – 20th November 2021.
- “Ostomy Day” Celebration on 2nd October 2021.

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 M.Ch. Pediatric Surgery, Two Post-Doctoral Fellow (PDF) in Pediatric Gastro surgery, 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

Research projects

Completed:

1. Is excision of appendix is beneficial of gut in children over retention of appendix in cases of malrotation. **PI:** Vijai Datta Upadhyay **Not Funded**, retrospective study, Project submitted in 2020 and completed in 2022, manuscript accepted for publication in Journal of Indian Association of Pediatric Surgeon in 2023
2. Collaborative project, Global Surg, submitted in 2021, approved in 2021, **PI**(Collaborative): Basant Kumar, Vijai Datta Upadhyaya for completed in 2021 and published, Lancet 2022 Nov Elective Surgery system strengthening development measurement and validation of the surgical preparation index across 1632 hospital in 119 countries; 5400(10363);1607-1717
3. Co-supervisor for thesis project of Dr. Avinash D. Gautam, Radiodiagnosis MD student **Thesis title:** Role of ultrasonography in diagnosis of biliary atresia in infants with neonatal cholestasis

(Completed), Funding SGPGI : Departmental (**PI: Dr. Rajnikant Yadav**), Status: Published (Gautam AD, Yadav RR, Sarma MS, Mandelia A, Agrawal V, Lal R, Gupta A. Shear Wave Elastography: A Reliable Secondary Parameter for Diagnosing Biliary Atresia in Infants With Neonatal Cholestasis. Cureus. 2023 Apr 20;15(4):e37911. doi: 10.7759/cureus.37911. PMID: 37122975; PMCID: PMC10136369.) Summary: Among secondary parameters, elastography can prove to be highly useful. The highest accuracy in diagnosing BA can be obtained by combining primary parameters with SWE.

- Co-supervisor (Dr. Basant Kumar) in intramural project of MD Radiodiagnosis Student (Dr. D Baby Swetha), **Title:** Evaluation and characterization of pediatric abdominal tumors by multidetector computerized tomography and its pathological correlation [**PI- Dr. Rajnikant Yadav**] funded by SGPGI.
- Co-supervisor (Dr. Basant Kumar) in intramural project of MD Radiodiagnosis Student (Dr. Shiv Prasad Yadav); **Title:** Multidetector computed tomographic evaluation of adrenal gland: Normative data and multi-parametric assessment [**PI- Dr. Sheo Kumar**] funded by SGPGI.

Research in progress

Funding agency, Name of project, Investigators

1. Intramural project, **Title:** NMR based Bile fingerprinting to unfold the metabolic pattern of bile in pediatric surgical patients with biliary pathology funded by SGPGI [**PI- Dr Vijai D Upadhyaya**] - A Pilot study. Approved in 2020 still running
2. SGPGI Intramural Project, **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. 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.
4. Non-funded project of M.ChPediatric 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.
5. Co-Investigator (Dr. Basant Kumar) in project of M.ChPediatric Gastroenterology Student (Dr. Upasana Ghosh); **Title:** Usefulness and accuracy of Fibroscan 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.

Publications

1. Halder R, Mishra P, Gurjar M, Sanjeev OP, Upadhyaya VD, Bhatnagar A, 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;11:33-9.
2. Borkar NK, Tiwari C, Mohanty D, Sinha A, Upadhyaya VD. Use of an Autologous Platelet-Rich Concentrate in Hypospadias Repair: A Systematic Review and Meta-analysis. Arab Journal of Urology, 2022, 11:33-9.
3. GlobalSurg Collaborative (Kumar B, Upadhyaya VD). Elective Surgery system strengthening development measurement and validation of the surgical preparation index across 1632 hospital in 119 countries; Lancet. 2022 5400(10363);1607-1717

4. Manogaran RS, Mandelia A, Bhuskute G, Mathialagan A. Head-and-Neck Solid Tumors in Children: A Retrospective Review from a Tertiary Care Institute in North India. *J Indian Assoc Pediatr Surg.* 2021 Sep-Oct;26(5):299-306. doi: 10.4103/jiaps.JIAPS_145_20. Epub 2021 Sep 16. PMID: 34728914; PMCID: PMC8515538.
5. Chauhan P, Gupta A, Mandelia A, Yadav S, Rahman K, Nityanand S. Clinical profile, outcome and challenges in the management of pediatric Burkitt lymphoma: a single center experience. *PediatrHematol Oncol.* 2021 Mar 1:1-17. doi: 10.1080/08880018.2020.1865493. Epub ahead of print. PMID: 33646922.
6. Haldar R, Mandelia A, Mishra P, Mishra A, Siddiqui Y. Central Venous Catheter-Related Infectious Complications in Pediatric Surgical Patients: A Single-Center Experience. *J Pediatr Intensive Care.* 2021 Feb 17;11(3):240-246. doi: 10.1055/s-0041-1723946. PMID: 35928034; PMCID: PMC9345667.
7. Rastogi A, Nasar N, Mandelia A, Singh TK. Posterior mediastinal mass in a neonate causing airway compression: Perioperative anesthetic management. *Ann Card Anaesth.* 2021 Apr-Jun;24(2):250-252. doi: 10.4103/aca.ACA_74_19. PMID: 33884988; PMCID: PMC8253014.
8. Lata I, Mandelia A, Mandal, K. Successful Antenatal Diagnosis and Management of a Rare Case of Congenital Fetal Choledochal Cyst. *Successful Antenatal Diagnosis and Management of a Rare Case of Congenital Fetal Choledochal Cyst, Maternal-Fetal Medicine July 2021;3(3):225-228.* doi: 10.1097/FM9.000000000000007
9. Rastogi A, Mandelia A, Priya V. Ultrasound-guided central venous cannulation—Missing climacteric step? *Indian J Anaesth.* 2021 Oct;65(10):770-772. doi: 10.4103/ija.ija_124_21. Epub 2021 Oct 29. PMID: 34898709; PMCID: PMC8607860.
10. Mandelia A, Sharma MS, Siddiqui Y, Mishra A. Division of long residual spur after Duhamel's pull through with endo-GIA stapler under colonoscopic guidance. *J Indian Assoc Pediatr Surg.* 2021 Jan-Feb;26(1):69-70. doi: 10.4103/jiaps.JIAPS_281_20. Epub 2021 Jan 11. PMID: 33953522; PMCID: PMC8074821.
11. Upadhyaya VD, Bharti LK, Mishra A, Yousuf M, Mishra P, Kumar B. Constipation after surgery for anorectal malformations: Unrecognized problem until it is a problem. *Afr J Paediatr Surg* 2021, 21;18:67-71.
12. 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. *Pancreaticology*, 2021; 21(4):812-818.
13. GlobalSurg Collaborative: Global variation in postoperative mortality and complications after cancer surgery: a multicenter, prospective cohort study in 82 countries. *Lancet*, 2021; 30; 397(10272):387-397.
14. Kurvateppa H, Kumar B. Effect of Preradiotherapy Education on Anxiety in Parents of Under-Five Children Undergoing Radiation Therapy for the First Time. *Journal of Pediatric Surgical Nursing.* 2021,10(2):83-89.
15. Singh Anita, Narng Kirti, Pandita Akash, Upadhyaya V D, Kumar B, Upadhyaya AD. Is application of salt for three days locally is sufficient to treat Umbilical Granuloma? *Afr J Pediatr surg.* 2021; 18(3): 160-63.

Chapter(s) in Book(s) : None



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Visiting Professors

1. Prof. A N Gangopadhyaya, Professor & Ex-HOD, IMS, BHU visited in March 2021 and mentor us for Exstrophy Bladder repair in OT and guest lecture on its management.
2. Prof. Vijayendra Kumar, Professor Pediatric Surgery IGMS, Patna and mentor us with his experience and lectures about ethical issues in Pediatric Surgery.

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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DEPARTMENT OF PLASTIC SURGERY AND BURNS

STAFF

Name of Faculty Members:

- | | |
|--|--|
| 1. Rajiv Agarwal, MS, MCh, DNB (Gen Surg),
DNB (Plastic Surg), FRCS Ed,
FRCS Eng, FRCS (Glasgow) | Professor and Head |
| 2. Ankur Bhatnagar, MS, MCh, FACS, FICS | Professor |
| 3. Anupama Singh, MS, MCh | Associate Professor |
| 4. Rajiv Kumar Bharti, MS, MCh | Assistant Professor
(Date of Joining: 06/02/2023) |
| 5. Nikhilesh Kumar, MS, MCh | Assistant Professor
(Date of Joining: 25/02/2023) |

Activities

Awards and Recognitions

Dr. Rajiv Agarwal:

- Conducted webinar on APSI accredited CME on Vascular Anomalies on 24th April 2021
- Masterclass on Mucormycosis Management Dr Reddy laboratories on 13th June 2021
- EXTERNAL EXAMINER in Department of Plastic Surgery LNJP hospital New Delhi DNB Plastic surgery on August 27-28 2021
- Members of Selection Committee Department of Plastic Surgery AIIMS Patna for Faculty Promotion 24th June 2021
- Member of Selection Committee Department of Plastic Surgery AIIMS New Delhi for Faculty Promotion 24th July 2021
- Organized conference on Plastic Surgery Day 15th July 2021
- Organized National Academy of burns Mid Term CME Hybrid Video on 6-7 th November

Dr. Ankur Bhatnagar

- Member Organizing Committee Mid Term CME BRASA (Annual Mid Term CME of Breast Reconstructive and Aesthetic Surgeons Association).
- **Invited Lectures-** Management of Post Mastectomy Breast Reconstruction CME on Breast Reconstruction – Department of Plastic Surgery Guru Ramdas Medical College Amritsar. 16th December 2021
- Prevention of Burns- NABI Online Seminar 5 December 2021
- **Member of International Society-** American Society of Plastic Surgery
- Member Organizing Committee Mid Term CME BRASA (Annual Mid Term CME of Breast Reconstructive and Aesthetic Surgeons Association)
- APSI CME – General Principals and Basic Sciences 7-8th August 2021



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Dr. Anupama Singh

- Certificate of appreciation by Indian Medical Association (2021)
 - Certificate of appreciation by Faculty forum SGPGIMS Lucknow Uttar Pradesh
 - Certificate of appreciation by National Academy of Burns India (NABI), Mid-term hybrid video CME chairing a session.
4. Invited as panelist in digital master class on Topic Role of Dermal substitute in trauma surgeries.

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

Number of students undergoing Training in MCh: 3

Research projects

Completed:

Title: Impact on Open Chronic Wound management in COVID-19 patients in a Dedicated COVID19 Superspecialty Tertiary Care Hospital. Is the wound SARS CoV2 (COVID-19) Positive? **Funding:** Intramural and Across other Institutions KGMU, Lucknow, PGIMER Chandigarh, AIIMS New Delhi, AIIMS Patna, AIIMS Bhubaneswar, SMS medical College Jaipur, RMLIMS Lucknow **Status:** Published in Indian Journal of Plastic Surgery.

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) (Multicentric) 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).

4. To Evaluate the role of serum Platelet derived growth Factor As a marker in The Diagnosis of Infantile Haemangioma. Dr Anupama Singh (AS Co -Investigator)

Funding Agency: Extramural, UPCST.

Publications

Indexed

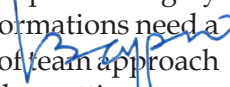
1. Agarwal R, Singhal M, Shankdhar VK et al. Plastic surgery practices amidst global COVID-19 pandemic: Indian consensus. J PlastReconstrAesthetSurg 2021 Jan;74(1):203-210. doi: 10.1016/j.bjps.2020.08.003. Epub 2020 Aug 8.
2. Agarwal D, Agarwal M, Agarwal R, Chandra M, Mishra A. Knowledge assessment and outcome of otolaryngology practice amidst Covid 19 pandemic in a busy ENT department. Accepted in Annals Journal & Bulletin Journal of the Royal College of Surgeons of England in 2021.
3. Agarwal R & Agarwal D. Kenneth Salyer 1936-2020: The legendary Craniofacial Surgeon. J Cleft lip palate, 2021.
4. Gaba S, Kampalli G, Goyal K, Suri V, Chauhan P, Meena SC, Bhatnagar A, Singh MP, Sharma RK. No traces of SARS-CoV-2 in wounds of COVID-19 positive patients: A pilot study. Indian Journal of Plastic Surgery. 2020 Dec;53(03):399-401
5. Singh A, Bhatnagar A, Singh V. Excision of large scalp arteriovenous malformations with aesthetic scalp reconstruction. World Journal of Plastic Surgery. 2020 Sep;9(3):302.
6. Bhatnagar A, Neyaz Z, Singh B, Mishra A, Upadyayaya VD, Kumar B. Bleomycin Sclerotherapy in massive macrocystic lymphatic malformation: minimal complications with maximum Results. Journal of Cutaneous and Aesthetic Surgery. 2020 Oct;13(4):319
7. Singh S, Srivastava AK, Baranwal AK, Bhatnagar A, Das KK, Jaiswal S, Behari S. Efficacy of silicone conduit in the rat sciatic nerve repair model: Journey of a thousand miles. Neurology India. 2021 Mar 1;69(2):318.
8. 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. Indian Journal of Endocrine Surgery and Research. 2021;16(2).
9. Bhatnagar A, Sthapak E, Kumar B, Upadhyaya VD. Outcome of Intralesional Bleomycin on Cystic Lymphangioma of Major Salivary Glands. Journal of Clinical & Diagnostic Research. 2020 Jun 1;14(6).

Chapter(s) in Book(s) 2021

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) thiempublisher. Dr Anupama Singh.

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


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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.

A handwritten signature in blue ink, appearing to read 'Varun Bajpai', is positioned above the printed name.

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DEPARTMENT OF PULMONARY MEDICINE

STAFF

Name of Faculty Members:

1. Alok Nath, MD, DM, FCCP	Professor and Head
2. Ajmal Khan, MD, DM, FCCP	Additional Professor
3. Zia Hashim, MD, DM, FCCP	Additional Professor
4. Mansi Gupta, MD, DM, FCCP	Associate Professor

Activities:

Dr. Alok Nath

- Invited as faculty at National Pulmonary conference NAPCON 2021
 - α. Delivered guest lecture on topic 'False Negative SARS CoV2 Tests: Challenges and Implications.
 - β. Chaired 2 sessions; a) Symposium on Recent guidelines and consensus statements and b) Disaster of the Century: COVID-19
- Invited guest faculty and delivered a lecture at AIIMS PULMOCRIT 2021 (Virtual) and participated in panel discussion on 'PULMONARY PRACTICE DURING AND AFTER COVID: Adapting to the New Normal.'
- Nominated as an Expert for preparing 'International Delphi consensus statement from the Fungal Infection Study Forum and Academy of Pulmonary Sciences, India for Guidelines for diagnosis, and Management of COVID-19-Associated Pulmonary Mucormycosis in September 2021
- Nominated as an Expert for formulation National Guidelines on Endobronchial Ultrasonography in February 2021.

Dr. Zia Hashim

- Invited faculty and delivered a guest lecture at National Pulmonary conference NAPCON 2021 on COVID Pre-Exposure Prophylaxis.
- Completed BCBR Certification.

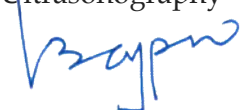
Dr. Ajmal Khan

- Faculty at the virtual National Conference on Pulmonary Diseases (NAPCON); delivered talk on "Approach to thoracoscopy; January 2021.
- 2. Faculty at 5th National Conference of Respiratory Medicine, Interventional Pulmonology & Sleep Disorders, Annual update Jaipur Golden Hospital, Delhi.

Participated as expert panellist on "Changing scenario of COPD & management - Case based discussion"; December 2021

Faculty for hands on workshop on Cyro Lung Biopsy

1. Nominated as an Expert for formulation National Guidelines on Endobronchial Ultrasonography in February 2021



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Dr. Mansi Gupta

- Faculty at the virtual National Conference on Pulmonary Diseases (NAPCON); delivered talk on “Single Inhaler once-daily triple drug therapy in COPD; January 2021.
- Faculty for workshop at AIIMS PULMOCRIT-2021, Annual update in Pulmonary, Critical Care, and Sleep Medicine; organized at AIIMS, Delhi and delivered a talk on “Basics of Non-Invasive Mechanical Ventilation”; March 2021.
- Obtained membership of following professional bodies
- Life Membership European Respiratory Society
- Life Membership United Academy of Pulmonary Medicine
- Annual Membership American Thoracic Society

Services

	2021	2020	2019
OPD registration			
New patients	1636	749	2577
Old patients	11000	7232	22571
Admission	573	368	802
Investigations			
Spirometry	1982	772	3319
Body Plethysmography	44	36	100
Diffusion studies	796	461	1364
Polysomnographies	50	62	166
Procedures			
Flexible Bronchoscopic procedures	1982	283	1068
EBUS Guided Procedures	56	44	193
Rigid bronchoscopy/Thoracoscopy procedures	33	40	77

Teaching and Training

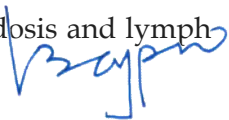
DM (Pulmonary Medicine) Students	2
PDCC (Interventional Pulmonology)	2
Hospital Service Residents	4

Research Projects

1. **Focus Areas:** Tuberculosis, Interstitial Lung Diseases, Airway Disorders, Sleep Medicine, Interventional Pulmonology.
2. Intramural Grants:

Dr. Alok Nath

- T-cell profile and metabolomic signatures in patients with pulmonary sarcoidosis and lymph node tuberculosis.



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- 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)

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:

1. 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
2. Evaluation of pulmonary manifestations of acromegaly: A pilot study (UPCST) (Rs. 8,50,000) (PI: Dr. Zia Hashim) 2021
3. Role of P-gp and HDAC2 and their reciprocal relationship in uncontrolled asthma. (ICMR) (Rs. 10,14,400) (PI: Dr. Zia Hashim) 2022
4. ICMR Network on Pulmonary Fibrosis (Funded by ICMR) (Rs 51,16500.00) (PI: Dr. Alok Nath)
5. Preventing Cardiac Adverse Events in COPD (George Institute Hyderabad) (22,88,000) (PI: Dr. Alok Nath)

Publications

1. Hashim Z, Neyaz Z, Marak RSK, Nath A, Nityanand S, Tripathy NK*. Practice Guidelines for the Diagnosis of COVID-19-Associated Pulmonary Aspergillosis in an Intensive Care Setting. J Intensive Care Med 2021;8850666211047166. DOI: 10.1177/08850666211047166.
2. Misra R, Kesarwani V, Nath A. Assessment of burden of drug-resistant tuberculosis at a tertiary care centre in northern India: a prospective single centre cohort study. BMJ Open 2021;11(4):e044096.
3. Mishra R, Chaturvedi R, Hashim Z*, Nath A, Khan A, Gupta M, Singh H, Agarwal V. Role of P-gp and HDAC2 and their Reciprocal Relationship in Uncontrolled Asthma. Curr Pharm Biotechnol 2021;22(3):408-413.
4. Verma V, Khan A, Rao RN, Nath A, Hashim Z. Role of Endobronchial ultrasound guided transbronchial needle aspiration with cellblocks in diagnosis and subtyping of intrathoracic lesions: Two year experience from a tertiary care center. Journal of Cytology 2021;38(3):120.
5. 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 2021:1-11.
6. Nigam N, Hashim Z*, Neyaz Z, Gupta M, Nath A. Inflammatory pseudotumor of the lung with complete resolution. Lung India 2021;38(1):90-91..

DEPARTMENT OF RADIODIAGNOSIS

STAFF

Name of Faculty Members:

1. Sunil Kumar, M.D.	Prof. & Head
2. Archana Gupta, M.D.	Professor
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

Activities:

Awards and Recognitions: None

National level CME: None

Invited sessions and chairpersons/lectures for Conferences:2021

Dr Namita Mohindra

- 9th Oct 2021- 'Mammography and digital breast tomosynthesis' in the webinar series organized by GE healthcare.
- 16 June 2021- Faculty to conduct quiz meeting organized by the IRIA
- 29th may 2021- 'Mammographic positioning and systematic viewing' in the Breast Imaging Master class series of webinar organized by online teaching forum IndianRadiologist.com in association with the Bandra Holy Family Hospital, Mumbai

Dr Anil Kumar Singh

- Lecture on "Role of Radiologist in Palliation of Obstructive Jaundice" at Postgraduate CME on Gall Bladder Cancer (Webinar dated 6/3/2021): Organized by Department of Radiotherapy and Surgical Gastroenterology SGPGIMS

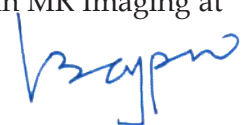
Dr Neeraj Jain

- CME on Advances in MR Imaging - Oct 2021. Role of Cardiac MRI in Non Ischemic Cardiomyopathy - King George Medical University. Lucknow

Prizes and Medals by students

Dr Tanya Dixit (PG student) First prize in quiz competition at CME on advances in MR Imaging at KGMU, Lucknow, KGMU, Lucknow 2021

Visit abroad or other institutions: None



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Memberships of Societies

Membership of professional bodies funded by Institute

Dr Neeraj Jain :

- 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)
- 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 Neuro-intervention

Teaching Workshops/ CME's organized: None

Services

The department offers all kind of diagnostic investigations and therapeutic procedures including Radiography, Ultrasonography, 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. Besides clinical work, the department conducts courses as described below. Routine interdepartmental clinical meetings are held weekly/monthly. Intradepartmental 6 academic sessions are in a week.

Year-wise available data (last three years 2019,2020,2021) for Department of Radiology

Particulars	Year 2019	Year 2020	Year 2021
Conventional Radiology (X-Rays)	89,732	93,164	34,301
Contrast Radiology (Barium / IVP)	1640	1376	115
USGs (Gray Scale)	37,688	35,662	14,069
USGs (Colour Doppler)	6284	6468	1935
USG guided FNAC / Aspirations etc	920	700	410
CT Scans	19,427	22,724	8860
CT guided FNAC / Biopsies	480	425	75
MRI (Plain / contrast)	7862	8297	3802
Angiography (Conventional/DSA)	1458	1828	835
Mammography	1620	1660	765
Any other investigation [intervention]	1833	1985	1337


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RCH-COVID-19 X-rays	-	-	5277
RCH- COVID-19 CT	-	-	728
RCH- COVID-19 USG	-	-	455

Training

At present the Department runs MD (Radiodiagnosis) course, PDCC in three different subspecialties (Gastro, Vascular and Neuroradiology), and B Sc in Radiodiagnosis and Imaging technology. No visiting professor could be invited due to Covid pandemic

One short term trainee attended the department for interventional procedures in 2021.

MD Students – 18

PDCC students – 6

BSc in Radiodiagnosis and imaging technology students – 40

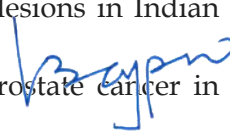
Research completed:

1. Spectrum of imaging findings on computed tomography in adrenal lesions. PI- Dr Archna Gupta. Student Dr Tanya Dixit. Funding : Departmental (Thesis project 2018-2021)
2. Shear wave elastography for assessment of changes in liver elasticity before and after radiological intervention in patients with Budd-Chiari syndrome. PI- Dr Archna Gupta. Student Dr. Rana Vishwadeep Mall Funding : Departmental (Thesis project, 2018-2021)
3. Role of real time shear wave elastography for assessment of allograft fibrosis in renal transplant recipients. PI Dr Hira Lal. (2018-2021). Funding : Departmental (Thesis project, 2018-2021)
4. Ultrasound and Real-time shear-wave elastography (SWE) in evaluation of patients with non-alcoholic fatty liver disease (NAFLD). PI- Dr Namita Mohindra. Student Dr Ranvijai Funding: Departmental (Thesis project, 2018-2021).
5. Ultrasound characterization and localization of peripheral areterio venous access stenotic lesions in failing AVF and DSA correlation and to evaluate role of percutaneous angiography in their management. PI Dr Raghunanadan. Student Dr Shivang Jha. (Funding: Departmental, thesis project, 2018-2021).
6. “Radiological Characteristic features of invasive fungal sinusitis and its treatment response”. PI-Dr. Vivek Singh. Student-Dr. Shamsudoha. (Funding: Departmental, thesis project, 2018-2021).

5. Research in progress

Funding agency, Name of project, Investigators

1. Guerbet (France) CRO -SIRO clinpharm Pvt .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 detection kit and detection app for prostate cancer in collaboration with Centre for bio-medical research Lucknow UP. Dr Hira Lal.


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Other ongoing research:

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).

Publications**Indexed**

1. Kumar D, Nath K, Lal H, Gupta A. Noninvasive urine metabolomics of prostate cancer and its therapeutic approaches: a current scenario and future perspective. *Expert Rev Proteomics*. 2021 Nov;18(11):995-1008. doi: 10.1080/14789450.2021.2011225. Epub 2021 Dec 6. PMID: 34821179.
2. Kumar N, Poddar U, Yadav R, Lal H, Pani K, Yachha SK, Srivastava A, Pandey R. Autoimmune Sclerosing Cholangitis in Children: A Prospective Case-Control Study. *Pediatr Gastroenterol Hepatol Nutr*. 2021 Mar;24(2):154-163. doi: 10.5223/pghn.2021.24.2.154. Epub 2021 Mar 8. PMID: 33833971; PMCID: PMC8007839.
3. Sardhara J, Behari S, Singh S, Srivastava AK, Chauhan G, Lal H, Das KK, Bhaisora KS, Mehrotra A, Mishra P, Jaiswal AK. A Universal Craniometric Index for Establishing the Diagnosis of Basilar Invagination. *Neurospine*. 2021 Mar;18(1):206-216. doi: 10.14245/ns.2040608.304. Epub 2021 Jan 25. PMID: 33494552; PMCID: PMC8021813.
4. Gaurav K, Yadav S, Kumar S, Mishra A, Godbole MM, Singh U, Mishra SK. Assessment of iodine nutrition of schoolchildren in Gonda, India, indicates improvement and effectivity of salt iodisation. *Public Health Nutr*. 2021 Dec;24(18):6211-6217. doi: 10.1017/S1368980021001956. Epub 2021 May 10. PMID: 33966669.
5. Prasad SN, Singh V, Selvamurugan V, Phadke RV. Vertebrobasilar dolichoectasia with typical radiological features. *BMJ Case Rep*. 2021 Feb 9;14(2):e239866. doi: 10.1136/bcr-2020-239866. PMID: 33563671; PMCID: PMC7875270.
6. Behari S, Dikshit P, Singh S, Singh G, Singh V, Phadke RV, Bhaisora KS. Paraclinoid Segment Aneurysms of the Internal Carotid Artery: Surgical Clipping. *Neurol India*. 2021 Sep-Oct;69(5):1184-1195. doi: 10.4103/0028-3886.329547. PMID: 34747782.
7. Neyaz Z, Prasad SN, Singh V, Phadke RV. Repeated aspiration and sclerotherapy to manage recurrent spinal epidermoid cyst. *BMJ Case Rep*. 2021 Jul 12;14(7):e239730. doi: 10.1136/bcr-2020-239730. PMID: 34253510; PMCID: PMC8276142.
8. Shetty GS, Singh V, Prasad SN, Phadke RV, Neyaz Z, Udiya A, Behari S. Spinal Epidural Fistulas-A Separate Entity to Dural Fistulas with Different Angioarchitecture and Treatment Approach. *World Neurosurg*. 2021 May;149:e600-e611. doi: 10.1016/j.wneu.2021.01.126. Epub 2021 Feb 3. PMID: 33548535.

9. Lal H, Yadav P, Kaul A, Prasad R, Akhtar J, Mishra P, Singh A. Role of Computed Tomography in Estimation of Residual Renal Function at One Year after Donor Nephrectomy: Comparison with Nuclear Scintigraphy. *Saudi J Kidney Dis Transpl.* 2021 Jul-Aug;32(4):993-998. doi: 10.4103/1319-2442.338312. PMID: 35229797.
10. Lal H, Singh RKR, Yadav P, Yadav A, Bhadauria D, Singh A. Non-contrast MR angiography versus contrast enhanced MR angiography for detection of renal artery stenosis: a comparative analysis in 400 renal arteries. *AbdomRadiol (NY).* 2021 May;46(5):2064-2071. doi: 10.1007/s00261-020-02836-5. Epub 2020 Nov 2. PMID: 33136181.
11. Kumar P, Singh A, Deshmukh A, Chandrashekhara SH. Imaging of Bowel Lymphoma: A Pictorial Review. *Dig Dis Sci.* 2022 Apr;67(4):1187-1199. doi: 10.1007/s10620-021-06979-3. Epub 2021 Apr 20. PMID: 33877497.
12. Mohindra S, Nayak HK, Mohindra N, Kumar A, Saraswat VA, Kumari N, Misra R, Ghoshal UC. Diagnostic yield of endoscopic ultrasound-guided fine-needle aspiration of tubercular lymphadenitis using combination of cytology and Gene XpertMycobacterium tuberculosis/rifampicin (MTB/RIF) genes. *Indian J Gastroenterol.* 2021 Dec;40(6):630-635. doi: 10.1007/s12664-020-01136-6. Epub 2021 Jan 14. PMID: 33443639.
13. Thomas KN, Jain N, Mohindra N, Misra D, Agarwal V, Gupta L. MRI and Sonography of the Knee in Acute Reactive Arthritis: An Observational Cohort Study. *J Clin Rheumatol.* 2022 Mar 1;28(2):e511-e516. doi: 10.1097/RHU.0000000000001785. PMID: 34538845.
14. Naveen R, Mohindra N, Jain N, Majumder S, Aggarwal A. Hip involvement in children with enthesitis related arthritis (ERA) is associated with poor outcomes in adulthood. *Clin Rheumatol.* 2021 Nov;40(11):4619-4627. doi: 10.1007/s10067-021-05807-3. Epub 2021 Jun 25. PMID: 34169374; PMCID: PMC8225398.
15. Hazarika K, Sahoo RR, Mohindra N, Wakhlu A, Manoj M, Bafna P, Garg R, Misra DP, Agarwal V, Wakhlu A. Clinical, radiologic and serologic profile of patients with interstitial pneumonia with autoimmune features: a cross-sectional study. *Rheumatol Int.* 2022 Aug;42(8):1431-1441. doi: 10.1007/s00296-021-04883-7. Epub 2021 May 27. PMID: 34046688; PMCID: PMC8158082.
16. 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.
17. Kumar N, Poddar U, Yadav R, Lal H, Pani K, Yachha SK, Srivastava A, Pandey R. Autoimmune Sclerosing Cholangitis in Children: A Prospective Case-Control Study. *Pediatr Gastroenterol Hepatol Nutr.* 2021 Mar;24(2):154-163. doi: 10.5223/pghn.2021.24.2.154. Epub 2021 Mar 8. PMID: 33833971; PMCID: PMC8007839.
18. Israrahmed A, Ahmad S, Prasad P, Yadav RR. Undifferentiated embryonal sarcoma of liver with macroaneurysms and arteriovenous shunt. *BMJ Case Rep.* 2021 Oct 29;14(10):e245112. doi: 10.1136/bcr-2021-245112. PMID: 34716147; PMCID: PMC8559111.
19. Israrahmed A, Yadav RR, Yadav G, Alpana, Helavar RV, Rai P, Jain MK and Gupta A. Systematic reporting of computed tomography enterography/enteroclysis as an aid to reduce diagnostic dilemma when differentiating between intestinal tuberculosis and Crohn's disease: A prospective study at a tertiary care hospital. *JGH Open.* Jan 2021; <https://doi.org/10.1002/jgh3.12478>.
20. Israrahmed A, Gupta A, Gupta A, Yadav RR. Supraclavicular extra-renal angiomylipoma: a challenging diagnosis. *BMJ Case Rep.* 2021 Nov 30;14(11):e247358. doi: 10.1136/bcr-2021-247358. PMID: 34848433; PMCID: PMC8634210.

Non Indexed

1. Singh AK, Gupta A, Neyaz Z, Mishra P. A Study of Anatomical Pattern of Inferior Phrenic Artery using Multidetector CT. *J Clin of Diagn Res.* 2021; 15(8):TC04 TC09 <https://www.doi.org/10.7860/JCDR/2021/50490/15253>.
2. Goel PK, Khanna R, Sahu AK, Jain N. Transcatheter heart valve implant in bicuspid aortic valves with large annuli. *IHJ Cardiovascular Case Reports (CVCR)*. Volume 5, Issue 1, 2021, Pages 44-47.
3. Rastogi, Ashita et al. "Gastric Outlet Obstruction in the Current Era-A Pictorial Review on Computed Tomography Imaging." *Journal of Gastrointestinal and Abdominal Radiology* 04 (2021): 139 - 148.
4. Singh, V., Prasad, S.N., Neyaz, Z., Bhargava, N., Yadav, U., Srivastav, A.K., Mishra, P., & Phadke, R.V. (2021). Computed Tomographic Morphometry of Lumbar Spine in Indian Population. *Indian Journal of Neurotrauma*.

b. Book chapter and books: None

Visiting Professor: None

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 Test Started in the Department: Transjugular Portal Vein Reconstruction for Portal Cavernoma Cholangiopathy

Patents: None



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DEPARTMENT OF RADIOTHERAPY

STAFF

Name of Faculty Members:

1. Shaleen Kumar, MD, DNB	Professor
2. Punita Lal, MD, DNB	Professor (& Head)
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

- Founder-Director, Kalyan Singh Super Specialty Cancer Institute, Lucknow, on Lien and returned in Sept 2021
- President, Indian Society of Neuro-Oncology
- President, UP Chapter of the Association of Radiation Oncologists of India

Dr Punita Lal

- Best poster award at the 32nd UP state chapter of AROI held on 18th-19th December, 2021, SN Medical College, Agra, UP.

Dr Shalini Singh

- Best paper award at the 32nd UP state chapter of AROI held on 18th-19th December, 2021, SN Medical College, Agra, UP.

Dr Sushma Agrawal

- Best paper award at the 32nd UP state chapter of AROI held on 18th-19th December, 2021, SN Medical College, Agra, UP.
- International Innovation Award by Conquer Cancer Foundation (American Society of Clinical Oncology)

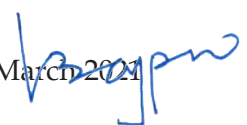
Dr Shagun Misra

- Best paper award at the 32nd UP state chapter of AROI held on 18th-19th December, 2021, SN Medical College, Agra, UP.
- Tata Trusts Professional Enhancement Grant

Invited sessions and chairpersons/lectures for Conferences:

Dr Shaleen Kumar

- Faculty at Indian GI Cancer Congress on Esophagus and Stomach, 12th & 13th March 2021



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- Delivered Presidential Address at the Annual Meeting of the Indian Society of Neuro-oncology, held at CMC, Vellore, 15 April 2021
- Chairperson – Prof GN Agrawal Oration, 16 Dec 2021 at KGMU
- Moderator – Panel Discussion- ‘MD Thesis – why is it needed to train a doctor?’, 32nd UPAROICON 2020, 18-19 December, 2021, Agra

Dr Punita Lal

- Invited Faculty to talk on “Re-irradiation in Nasopharyngeal cancers- Patient selection, technique and outcomes” in 15th Annual conference of North-Eastern chapter of AROI organized by Dr. B Borooah Cancer Institute, Guwahati, held online on 26th March, 2021
- Invited faculty to talk on “Rehabilitation of Head and neck cancers after Radiotherapy” in Head and neck master class series conducted by RCC Trivandrum, held online on 24th January, 2021.
- Moderated a Panel on “Journey of Cancer Registry program in Uttar Pradesh” on the 35th Foundation Day of department of Radiotherapy, KGMU, on 16th December, 2021
- Invited talk on “Challenges and limitations of radiation in the Skull Base tumors” in 21st Annual conference of Federation of Head & Neck Oncology (FHNO) held online at Thiruvananthapuram on 12th December, 2021
- Invited talk on “Re-irradiation in Nasopharyngeal cancers- Patient selection, technique and outcomes” in 15th Annual conference of North-Eastern chapter of AROI organized by Dr. B Borooah Cancer Institute, Guwahati, held online on 26th March, 2021

Dr KJ Maria Das

- Faculty and lectured in the 37th ICRO SUN PG Teaching program on Medical Physics planned as a Webinar, end of March 2021-Wednesday to Friday-March 31st to April 2nd 2021
- Faculty and lectured serial online lectures conducted by South Asia Centre for Medical Physics and Cancer Research (SCMPCR), E-Learning program on 06-27 March 2021.
- Faculty and delivered lecture in the “SAARC Radiation Oncology symposium” on 27 March 2021 organized by Oncology Club Bangladesh & Radiation Knowledge.

Dr Shalini Singh

- XIX annual meeting (virtual) on “evidence based management of cancers in India” technology and Cancer Cure, Promise and reality of the brave new world radiation oncology TMC EBM 2021 Tata Memorial Hospital, Mumbai 6-7th March 2021
- XIX Annual WCI-TMH Radiotherapy Practicum (virtual) Tata Memorial Hospital, Mumbai 24th And 25th Sept 2021

Dr Sushma Agrawal

- Organised the Webinar on postgraduate course in gall bladder cancer on 6.3.21
- Presented “Adjuvant therapy in gallbladder cancer” at the postgraduate online course in gall bladder cancer on 6.3.21
- Part of the organisation of activity on World Cancer Day (along with hospital administration department), Feb 2021
- Member of organizing team TELEMEDICON, 2021, 12-14th November 2021 and Chairperson for one session
- Invited lecture on Advances in locally advanced breast Cancer in UP AROICON, 18-12-21 Agra.
- Attended Online ESTRO, 2021

- Online Estro Course on Lower GI cancers, 2021

Dr Shagun Misra

- Faculty at Indian GI Cancer Congress on Esophagus and Stomach, 12th & 13th March 2021, Organising Secretary and presented a practice survey on treatment of esophageal and gastric cancers.
- ESTRO Virtual Course Upper GI: Technical and Clinical Challenges for radiation oncologist 27th to 31st March 2021
- 19th Annual Virtual Conference of the Women's Cancer Initiative", Moderator, Understanding Oligometastases from the experts, Tata Memorial Centre, Mumbai held on 1st & 2nd October 2021.
- Virtual Canadian Multidisciplinary Hepatocellular Carcinoma Conference, October 29,2021
- Virtual Conference on Sarcoma and Melanoma update 27th and 28th November 2021
- Invited Faculty,NALCCON 2021, the "11th Annual Conference of Indian Society for Study of Lung Cancer", JIPMER, Puducherry, India, (November 26th & 27th and December 3rd & 4th 2021) Role: Panelist, Multimodality management of early-stage lung cancer in 2021
- 32nd UPAROICON 18th & 19th December 2021, Agra, Lecture taken on optimizing chemoradiotherapy in management of carcinoma esophagus.
- Invited Faculty ,SABCS Highlights 2021: Potential Practice Changing Breast Cancer Trials, 07th & 08th January 2022, Apollo Hospitals, Chennai, Paper presented Can radiation replace Axillary Lymph Node Dissection After Positive Sentinel Lymph Node Biopsy?

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



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- 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

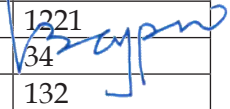
- Association of Radiation Oncologists of India
- European Society for Therapeutic Radiology and Oncology
- European Society for Medical Oncology
- American Society of Clinical Oncology

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

	2019	2020	2021
New Patients seen	3270	1540	2802
New Patients registered	2513	1339	2300
OPD patients seen on Follow-up	15524	7698	9877
Indoor admissions	1607	1001	1398
Chemotherapy	5066	2714	3683
External Beam Radiotherapy			
Versa-HD	4062	4767	506
Varian 2100	19687	11448	510
CT scan	1526	986	1221
Simulator	33	20	34
Brachytherapy	232	230	132


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Training

4 new MD students are recruited every year. 13 MD students were under training and 6 senior residents were trained.

Research completed during Jan 21- December21

Dr Punita Lal:

- Retrospective audit of Neoadjuvant chemo therapy followed by Concurrent Chemo-Intensity Modulated Radiotherapy in advanced Head and Neck cancers - long term sequelae and outcomes.

Dr Neeraj Rastogi

- Oral Capecitabine versus best supportive care in metastatic gallbladder carcinoma. An Observational study.

Dr Shalini Singh:

- Implementation of frameless Stereotactic Radiotherapy in brain tumors

Dr Sushma Agrawal:

- Evaluation of cosmesis and late-effects in breast cancer treated with hypo fractionated radiotherapy

Dr Shagun Misra:

- Assessment of financial distress and its association with quality of life and symptoms in advanced cancer patients. Principal Investigator

Research in progress

Dr Punita Lal

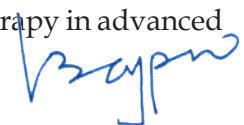
- Hypo fractionated Radiation Therapy comparing a standard radiotherapy schedule (over three weeks) with a novel one week schedule in Adjuvant breast cancer: An open label randomised controlled study (HYPORT- Adjuvant).Co-Investigator in a Multicentric trial.
- A retrospective audit of Salivary gland tumors- an audit from a tertiary care centre in Northern India.Principal Investigator.

Dr Shalini Singh

Implementation of CT Image based Intracavitary brachytherapy treatment in Cancer Cervix. Principal Investigator.

Dr Sushma Agrawal

- A pilot study of neoadjuvant strategies in locally advanced gallbladder cancer. Principal Investigator.
- A pilot study of preoperative radiotherapy in partial responders to primary systemic therapy in locally advanced breast cancer. Principal Investigator.
- A randomised study of consolidation chemoradiation after first-line chemotherapy in advanced gallbladder cancers. Principal Investigator.



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Dr Shagun Misra

- An audit of presentation pattern, management and outcomes of cholangiocarcinoma reporting to a tertiary care centre, Principal Investigator.

Publications

1. Petit C, Lacas B, Pignon JP, Le QT, Grégoire V, Grau C, Hackshaw A, Zackrisson B, Parmar MKB, Lee JW, Ghi MG, Sanguineti G, Temam S, Cheugoua-Zanetsie M, O'Sullivan B, Posner MR, Vokes EE, Cruz Hernandez JJ, Szutkowski Z, Lartigau E, Budach V, Suwiński R, Poulsen M, Kumar S, Ghosh Laskar S, Mazon JJ, Jeremic B, Simes J, Zhong LP, Overgaard J, Fortpied C, Torres-Saavedra P, Bourhis J, Aupérin A, Blanchard P; MACH-NC and MARCH Collaborative Groups. Chemotherapy and radiotherapy in locally advanced head and neck cancer: an individual patient data network meta-analysis. *Lancet Oncol.* 2021 May;22(5):727-736. doi: 10.1016/S1470-2045(21)00076-0. Epub 2021 Apr 13. PMID: 33862002.
2. Lacas B, Carmel A, Landais C, Wong SJ, Licitra L, Tobias JS, Burtneess B, Ghi MG, Cohen EEW, Grau C, Wolf G, Hitt R, Corvò R, Budach V, Kumar S, Laskar SG, Mazon JJ, Zhong LP, Dobrowsky W, Ghadjar P, Fallai C, Zakotnik B, Sharma A, Bensadoun RJ, Ruo Redda MG, Racadot S, Fountzilias G, Brizel D, Rovea P, Argiris A, Nagy ZT, Lee JW, Fortpied C, Harris J, Bourhis J, Aupérin A, Blanchard P, Pignon JP; MACH-NC Collaborative Group. Meta-analysis of chemotherapy in head and neck cancer (MACH-NC): An update on 107 randomized trials and 19,805 patients, on behalf of MACH-NC Group. *Radiother Oncol.* 2021 Mar;156:281-293. doi: 10.1016/j.radonc.2021.01.013. Epub 2021 Jan 27. PMID: 33515668; PMCID: PMC8386522.
3. Gupta T, Singh VP, Balasubramian A, Menon H, Kurkure PA, Kumar S, Jalali R. ISNO Position Statement on Treatment Guidance in Neuro-oncology During Pandemics. *Neurol India.* 2020 Jul-Aug;68(4):769-773. doi:10.4103/0028-3886.293460. PMID: 32859812.
4. Chatterjee S, Chakraborty S. Consensus on contentious issues relevant for breast cancer management for the Indian scenario: Statements following a multicentre expert group meeting. Controversies to Consensus Author Group. *Indian J Med Res.* 2021 Aug;154(2):180-188. PMID: 35142646.
5. Pant S, Lal P, Misra S, Gupta P, Das KJM, Kumar S. Clinical outcomes and impact of prognostic factors following adjuvant radiotherapy in oral tongue cancer patients. *Egypt J Otolaryngol*2021;37:107.
6. Misra S, Mishra A, Lal P, Srivastava R, Verma M, Senthil Kumar SK, Maria Das KJ. Cardiac dose reduction using deep inspiratory breath hold (DIBH) in radiation treatment of left sided breast cancer patients with breast conservation surgery and modified radical mastectomy. *J Med Imaging Radiat Sci.* 2021
7. Lal P. Role of Radiotherapy in Retinoblastoma - Letter to the editor. *Ind J Ophthal* 69; Oct (10): 2021.
8. Misra S, Yeshala SK, Singh S, Singh RK, Maria Das KJ, Kumar S, Kumar S. A Pilot Study of Perioperative Cisplatin-Capecitabine Chemotherapy With Preoperative Chemoradiation for Resectable Gastric Cancers. *Am J Clin Oncol.* 2021 Sep 1;44(9):475-481.
9. Azoury, F, Misra S, Barry A, Helou, J. Role of radiation therapy in triple negative breast cancer: current state and future directions – a narrative review. *J Precision Cancer Medicine* 2021 Mar;5:3.
10. Misra S, Mishra A, Lal P, Srivastava R, Verma M, Senthil Kumar SK, Maria Das KJ. Cardiac dose reduction using deep inspiratory breath hold (DIBH) in radiation treatment of left sided breast cancer patients with breast conservation surgery and modified radical mastectomy. *J Med Imaging Radiat Sci.* 2021 Jan 25;S1939-8654(20)30397-0.

11. A Singh, S Singh, S Agrawal, J Verma, S Singh, P Misra, A K Jaiswal, S Behari, S Jaiswal. A single-centre observational study of 124 surgically managed glioma patients: molecular subtyping and its correlation with clinico-radiological profile. *Int Surg J.* 2020 Sep;7(9):3047-3055.
12. Yashveer Singh, Ved P. Maurya, Arun K. Srivastava, Kuntal K. Das, Kamlesh S. Bhaishora, Jayesh Sardhara, Pawan K. Verma, Anant Mehrotra, Awadhesh K. Jaiswal, Sanjay Behari, Prabhakar Mishra, Sushma Agrawal. Clinical Experience and Management Outcome of WHO Grade II Pediatric Intramedullary Ependymomas: A Descriptive Study. *Journal of Pediatric Neurosciences*, 2021, 248.144.192.242
13. Deepak Kumar, Neeraj Rastogi, Sushma Agarwal, Shagun Mishra, Shaleen Kumar, Punita Lal, Shalini Singh, Sunil Choudhary. A comparative study of gemcitabine and cisplatin versus oral capecitabine alone in metastatic gallbladder cancer. *JCRT* 2022 Jul-Sep;18(4):939-945
14. Agrawal Sushma, Prabhakar Mishra, Anjali Mishra, Gaurav Agarwal. A simple risk scoring system for predicting recurrence in women with locally advanced breast cancer (LABC) treated with Neoadjuvant chemotherapy (NACT). *Journal of Advances in Medicine and Medical Research.* 2021.
15. Singh N, Agrawal S, Jiwnani S, Khosla D, Malik PS, Mohan A, Penumadu P, Prasad KT. Lung cancer in India. *J Thorac Oncol.* 2021
16. Misra S, Yeshala SK, Singh S, Singh RK, Maria Das KJ, Kumar S, Kumar S. A Pilot Study of Perioperative Cisplatin-Capecitabine Chemotherapy With Preoperative Chemoradiation for Resectable Gastric Cancers. *Am J Clin Oncol.* 2021 Sep 1;44(9):475-481. doi: 10.1097/COC.0000000000000844. PMID: 34183522.

Departmental Highlights

1. The department celebrated its Annual Foundation Day on 18th August 2021, and conducted an online webinar by alumni Dr Sapna Nangia on Proton therapy and Dr NR Datta on Hyperthermia.
2. Dr Sushma Agrawal organised a Webinar on postgraduate course in Gall bladder Cancer on 6.3.21, which was attended by around 100 students.



Lt Col Varun Bajpai VSM
Executive Registrar
SGPGIMS, Lucknow

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. Anu Behari, 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:

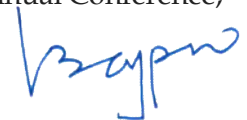
Honours and Awards:

1. Dr. Nalini Kanta Ghosh received the APDW Educational Grant for his presentation on 'Retroperitoneal metastasis in Carcinoma Gall bladder - As bad as distant metastasis' at Kualalampur. August 2021.
2. Dr. Supriya Sharma - 2 nd best paper award - free oral paper session titled "Strategies for in vitro attenuation of profibrotic gene phenotype expression in human pancreatic stellate cells" at 31 st National Conference of Indian Association of Surgical Gastroenterologists (virtual), October, 09.10.2021 till October.10.2021.

Invited sessions and chairpersons/lectures for Conferences: 2021

Prof. Rajan Saxena

- Bile Duct Injury – How to Suspect and manage in a postoperative patient. Invited Lecture at JSC, MGIMS, Jaipur, Feb. 2021.
- Do's and Don'ts of Surgery for Carcinoma Gall Bladder. CME lecture at UP ARO CON, March 2021.
- Should Complications occur in surgery? CME Lecture at AMU Surgery Update, Aligarh, April 2021.
- Management of Complex Biliary Strictures. CME Lecture at IASGCON, 2021, Chandigarh.
- Liver Transplantation and Pregnancy. Invited lecture at North Zone FOGSI Annual Conference, MMIMSR, Ambala, October 6, 2021.



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Dr. Supriya Sharma

- Talk on “How and when to suspect bile duct injury after cholecystectomy” at 1 st Jaipur surgical fest (virtual) 04.12.2021 to 05.12.2021

Visits abroad or to other Institutions for academia purposes with dates /period of visit:

Dr. Rahul, Dr. Supriya Sharma and Prof. R.K. Singh Spent 2 months at the Institute of Liver and Biliary Sciences, in Delhi as surgical faculty deputed for training in liver transplantation in 2021.

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

SGE WEEK – August 23-25, 2021 – Hemorrhagic Complications in GI Surgery

Services:

Opd, Admissions, Discharges and Operative Work

Particular	2019	2020	2021
New Registration	2792	696	1697
Follow-up	15299	5111	12000
Admissions	1632	637	771
Operations (Surgery)	1095	533	1240

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

Training:

At present, there are 29 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) : 4


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

Research completed during the year

Non Funded:

R Saxena

- Gravity dependent and hand held 'push' injection method of cholangiography: A comparison of outcomes and efficacy, Not funded 2018, completed, under publication.
- Liver Resections for Benign Biliary Strictures. Not funded 2018, completed, under publication
- Continuous versus interrupted suture hepaticojejunostomy - safety and economics. No Funding. completed, published
- Comparative study of dunking and modified dunking versus duct to mucosa techniques of pancreaticojejunostomy
- 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

A Behari

- Metagenomics of microbial communities in gallbladder bile from patients with gallbladder cancer or cholelithiasis and verification of bacterial infection history. No funding. 2019, completed, under publication
- Unconventional shunts in EHPVO - Friends in need!. No Funding. completed, published
- Surgical obstructive jaundice: a surrogate marker of advanced disease in gallbladder cancer. No Funding. , completed, under publication
- Splenectomy without porto-systemic shunt in EHPVO- is it enough? No Funding. completed, under publication

Rajneesh K Singh

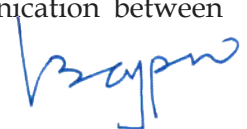
- A Study of Long-Term Outcomes of Surgery For Corrosive Esophageal Strictures - Comparison of Colon Versus Gastric Conduit Reconstruction. No funding. completed, under publication.
- A retrospective study of Non-functional Pancreatic Neuro-endocrine tumours (NF-pNET) - Our experience'. No Funding. Completed, Under Publication.
- Benign Tracheo-esophageal fistula in adults - Our experience. No Funding. Completed, Under Publication

Ashish Singh

- Retroperitoneal lymph node metastasis in gallbladder cancer: as bad as distant metastasis completed and published

Rahul

- Determinants of curative resection in incidental gallbladder carcinoma with special reference to timing of referral
- A questionnaire-based study on quality and adequacy of clinical communication between physicians and family members of COVID-19 patients



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Ashok Kumar

- Role of serum CRP , interleukin 6 and Serum albumin as predictors of anastomotic leak in colorectal surgery

Research in progress

1. Gravity dependent and hand held 'push' injection method of cholangiography: A comparison of outcomes and efficacy. PI: Rajan Saxena. Funding Agency: None.
2. Liver Resections for Benign Biliary Strictures. PI: Rajan Saxena. Funding Agency: None.
3. Continuous versus interrupted suture hepaticojejunostomy–safety and economics. PI: Rajan Saxena. Funding Agency: None.
4. Role of mitochondrial dynamic related proteins (Fusion and fission proteins) in north Indian colorectal patients. PI: Ashok Kumar Funding Agency: SGPGI Intramural.
5. 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
6. Deciphering the Role of Mitochondrial Quality Control in Colorectal Cancer Progression: A Potential therapeutic approach. PI: Ashok Kumar. Funding Agency: None.
7. Factors Affecting the QOL after stoma: A study on north Indian patients. PI: Ashok Kumar. Funding Agency: None.
8. Role of ki 67 index in colorectal cancer. PI: Ashok Kumar. Funding Agency: None.
9. Role of serum CRP, interleukin 6 and Serum albumin as predictors of anastomotic leak in colorectal surgery. PI: Ashok Kumar. Funding Agency: None.
10. 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: Rs. 48 Lakh.
11. 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.
12. 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. Grant Amount: Salary for staff in cancer registry.
13. Unconventional shunts in EHPVO-Friends in need! PI: Anu Behari. Funding Agency: None.
14. Surgical obstructive jaundice: a surrogate marker of advanced disease in gallbladder cancer. PI: Anu Behari. Funding Agency: None.
15. Predictors of long-term (more than 5-years) survival in gallbladder cancer. PI: Anu Behari. Funding Agency: None.
16. Splenectomy without porto-systemic shunt in EHPVO- is it enough? PI: Anu Behari. Funding Agency: None
17. Predictors of shunt thrombosis in EHPVO. PI: Anu Behari. Funding Agency: None.
18. Database creation for computational predictive analysis of treatment response assessment in Esophageal cancer patients in India. PI: Rajneesh K Singh.
19. 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.

20. A retrospective study of Non-functional Pancreatic Neuro-endocrine tumours (NF-pNET)-Our experience. PI: Rajneesh K Singh. Funding Agency: None.
21. Benign Tracheo-esophageal fistula in adults-Our experience. PI: Rajneesh K Singh. Funding Agency: None.
22. Retroperitoneal lymph node metastasis in gallbladder cancer: as bad as distant metastasis. PI: Ashish Singh.
23. 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: Rs.4.85 Lacs.
24. Determinants of curative resection in incidental gallbladder carcinoma with special reference to timing of referral. PI: Rahul. Funding Agency: None.
25. A questionnaire based study on quality and adequacy of clinical communication between physicians and family members of COVID-19 patients. PI: Rahul. Funding Agency: None

Publications

1. 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.
2. Yadav A, Kumar A, Siddiqui MH. Detection of circulating tumour cells in colorectal cancer: Emerging techniques and clinical implications. *World J Clin Oncol.* 2021 Dec 24;12(12):1169-1181. doi: 10.5306/wjco.v12.i12.1169. PMID: 35070736; PMCID: PMC8716996.
3. Rahul, Haldeniya K, Singh A, Bhatt N, Mishra P, Singh RK, Saxena R. Determinants of curative resection in incidental gallbladder carcinoma with special reference to timing of referral. *Ann Hepatobiliary Pancreat Surg.* 2021 Nov 30;25(4):492-499. doi: 10.14701/ahbps.2021.25.4.492. PMID: 34845121; PMCID: PMC8639303.
4. Saxena R, Ghosh NK, Galodha S. Economics and safety of continuous and interrupted suture hepaticojejunostomy: An audit of 556 surgeries. *Ann Hepatobiliary Pancreat Surg.* 2021 Nov 30;25(4):472-476. doi: 10.14701/ahbps.2021.25.4.472. PMID: 34845118; PMCID: PMC8639300.
5. Mishra SK, Kumari N, Krishnani N, Singh RK, Mohindra S. Identification and prevalence of potentially therapeutic targetable variants of major cancer driver genes in ampullary cancer patients in India through deep sequencing. *Cancer Genet.* 2021 Nov;258-259:41-48. doi: 10.1016/j.cancergen.2021.08.001. Epub 2021 Aug 15. PMID: 34455261.
6. Sarma MS, Tripathi PR, Arora S. Corrosive upper gastrointestinal strictures in children: Difficulties and dilemmas. *World J Clin Pediatr.* 2021 Nov 9;10(6):124-136. doi: 10.5409/wjcp.v10.i6.124. PMID: 34868889; PMCID: PMC8603639.
7. Srivastava M, Chandra A, R R, Nigam J, Rajan P, Parmar D, Srivastava RN, Gupta V. Expression of Antimicrobial Peptides and Cytokines in Human Omentum Following Abdominal Surgery. *Cureus.* 2021 Aug 26;13(8):e17477. doi: 10.7759/cureus.17477. PMID: 34589365; PMCID: PMC8464651.
8. Mishra K, Behari A, Shukla P, Tsuchiya Y, Endoh K, Asai T, Ikoma T, Nakamura K, Kapoor VK. Risk factors for gallbladder cancer development in northern India: A gallstones-matched, case-control study. *Indian J Med Res.* 2021 May;154(5):699-706. doi: 10.4103/ijmr.IJMR_201_19. PMID: 35532588; PMCID: PMC9210525.
9. Kumari N, Singh RK, Mishra SK, Krishnani N, Mohindra S, L R. Identification of PI3K-AKT signaling as the dominant altered pathway in intestinal type ampullary cancers through whole-

- exome sequencing. *J PatholTransl Med.* 2021 May;55(3):192-201. doi: 10.4132/jptm.2021.01.23. Epub 2021 Mar 9. PMID: 33677956; PMCID: PMC8141966.
10. Gupta V, Lal P, Vindal A, Singh R, Kapoor VK. Correction to: Knowledge of the Culture of Safety in Cholecystectomy (COSIC) Among Surgical Residents: Do We Train Them Well For Future Practice? *World J Surg.* 2021 May;45(5):1602. doi: 10.1007/s00268-021-05996-7. Erratum for: *World J Surg.* 2021 Apr;45(4):971-980. PMID: 33604713.
 11. Gupta V, Lal P, Vindal A, Singh R, Kapoor VK. Knowledge of the Culture of Safety in Cholecystectomy (COSIC) Among Surgical Residents: Do We Train Them Well For Future Practice? *World J Surg.* 2021 Apr;45(4):971-980. doi: 10.1007/s00268-020-05911-6. Epub 2021 Jan 16. Erratum in: *World J Surg.* 2021 Feb 18;: PMID: 33454794.
 12. Shukla R, Shukla P, Behari A, Khetan D, Chaudhary RK, Tsuchiya Y, Ikoma T, Asai T, Nakamura K, Kapoor VK. Roles of *Salmonella typhi* and *Salmonella paratyphi* in Gallbladder Cancer Development. *Asian Pac J Cancer Prev.* 2021 Feb 1;22(2):509-516. doi: 10.31557/APJCP.2021.22.2.509. PMID: 33639667; PMCID: PMC8190372.
 13. Rahul, Verma A, Yadav P, Sharma VK, Sanjeev OP. Non-COVID Surgical Emergency During the Nationwide Lockdown due to Corona Pandemic: a Critical Appraisal. *Indian J Surg.* 2021 Feb;83(1):268-272. doi: 10.1007/s12262-020-02549-5. Epub 2020 Aug 10. PMID: 32837086; PMCID: PMC7416797.
 14. Ravina M, Bansal H, Lukose TT, Mishra AK, Moideen A. Incidentally Diagnosed Esophago-Pulmonary Fistula on 18F-FDG PET/CT in a Case of Carcinoma Esophagus: A Life-Threatening Emergency. *Clin Nucl Med.* 2021 Jun 1;46(6):515-516. doi: 10.1097/RLU.0000000000003532. PMID: 33591025.
 15. Roy MK, Pipara A, Kumar A. Surgical management of adenocarcinoma of the transverse colon: What should be the extent of resection? *Ann Gastroenterol Surg.* 2020 Jul 26;5(1):24-31. doi: 10.1002/ags3.12380. PMID: 33532677; PMCID: PMC7832969.
 16. Kumari N, Singh RK, Mishra SK, L R, Mohindra S, Krishnani N. Prevalence and spectrum of pathogenic germline variants in intestinal and pancreatobiliary type of ampullary cancer. *Pathol Res Pract.* 2021 Jan;217:153309. doi: 10.1016/j.prp.2020.153309. Epub 2020 Dec 4. PMID: 33341547.

Visiting professors: None

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: Nil



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DEPARTMENT OF TRANSFUSION MEDICINE

STAFF

Name of Faculty Members:

1. R. K. Chaudhary, M.D.	Professor & Head
2. Priti Elhence, M.D.	Professor
3. Anupam Verma, M.D., PDCC	Professor
4. Prashant Agarwal, MD, PDCC	Professor
5. Atul Sonkar, MD	Professor
6. Dheeraj Khetan, MD	Addl Professor
7. Rahul Katharia, MD	Addl. Professor

Activities

Awards & Recognition:

Dr. R. K. Chaudhary:

- Admitted as Fellow of the Royal College of Pathologist conferring the award of FRCPATH in February 2021
- Received Life-Time Achievement Award of the Indian Society of Blood Transfusion & Immunohematology in national conference of ISBTI on Feb 27, 2021

Invited Sessions as Chairpersons / Guest lectures

Dr. R. K. Chaudhary:

- Delivered guest lecture in International Symposium on Blood Safety, organised by the Dept of Transfusion Medicine, PGI, Chandigarh in Oct 2021
- Chairperson of a scientific session in WHO, South East Asia training series on "Achieving 100% Voluntary Blood Donation in South East Asia, organised by the dept of Transfusion Medicine, PGI Chandigarh on Oct 9, 2021
- Delivered a guest lecture on "Quality Indicators of Blood Donation in WHO, South East Asia training series on "Achieving 100% Voluntary Blood Donation in South East Asia, organised by the dept of Transfusion Medicine, PGI Chandigarh on Oct 9, 2021
- Delivered a guest lecture on "Regulatory Considerations of Blood Component Therapy and Plasma Fractionation" in training webinar series organised by World Health Organization (WHO) in collaboration with JSS Academy of Higher Education & Research, Mysuru (JSS AHER) for the WHO-South East Asian Region Countries" on Nov 11, 2021
- Delivered a guest lecture on Role of EQAS in Immunohematology testing in WHO training series - Role of EQAS in IH testing organised by the dept of Transfusion Medicine, St Johns Med College, Bangalore in Nov 2021

Dr Priti Elhence

- Facilitator (Reviewer) for training material on 'Quality Assurance in Transfusion transmitted Infections testing' and waste management of WHO (SEARO) & Asian Association of Transfusion Medicine. March- June, 2021


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- Chairperson of session 'Towards 100% voluntary blood donation- understanding challenges and Barriers in south East Asia' in WHO South East Asia Region Training series conducted by PGIMER, Chandigarh. October 7th Oct to 9th , 2021.
- Chairperson in 9thTransmedcon, December 17th to 18th ,2021 of Indian Society of Transfusion Medicine.
- Chairperson in 3rd Joint AABB & AATM congress December 3rd to 4th ,2021 .

Dr Anupam Verma

- Additional charge of Chief Medical Superintendent of Kalyan Singh Super Specialty Cancer Institute, CG City Lucknow w.e.f October 6th , 2021 till date.
- Nodal Officer Vaccination program (Covid-19)of SGPGIMS from August 16, 21 to February 16, 2022 managing vaccination of health care workers, staff and general public as per GoI guidelines.
- NACO online training lecture on bedside transfusion was taken on March 19,,2021 for medical officers.
- Poster judge for 45th Annual National Conference 'TRANSCON - 2020' held on a virtual platform on February 27th and 28th, 2021; organized by the Tamil Nadu Chapter of ISBTI.
- Chaired a session in online hemophilia conference on January 22, 2021 organized by Dept of Hematology, SGPGIMS.

Prof Prashant agarwal

- Speaker at national conference, Transmedcon December 17, 2021
- Principal Assessor for National Accreditation Board of Hospitals (NABH)
- Member Executive Committee Indian Society of Transfusion Medicine

Dr Dheeraj Khetan

- Chairperson, session- "Clinical Transfusion" in the 16th annual congress of Asian Association of Transfusion Medicine (AATM) and 3rd Joint Congress with American Association of Blood Banks (AABB) organized by AATM Jaipur, on Dec 3, 2021
- Coordinator for online blood safety training program "Training of Trainers" for Medical Officers under the aegis of State Blood Transfusion Council, Uttar Pradesh from 18th to 20th March 2021.
- Topic- Hemovigilance nurse: A unique initiative" in the 1st National Conference on Hemovigilance organized by National Institute of Biologicals from 9-11 Dec 2021.
- Topic- Donor recruitment and retention for the blood center virtual refresher training program organized by State Blood Transfusion Council (SBTC), UP on July 26, 2021.
- Topic " Alloimmunization in Thalassemia: what should be the right approach for management?" in the 2nd Hemophilia and Thalassemia Update program organized under the aegis of Hematology foundation by Dept of Hematology, SGPGI on 10th Apr 2021.
- Topic- "Effect of Convalescent plasma therapy on time to clinical improvement in patients with severe and life threatening COVID 19: A Randomised Control Trial" for online live journal club coordinated by International Society of Blood Transfusion (ISBT),on 29th Jan 2021

Membership of Societies

Dr. R. K. Chaudhary:

- Indian Society of Blood Transfusion & Immunohematology
- Indian Society of Transfusion Medicine



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Prof Prashant Agarwal

- Member International Society of Blood Transfusion

CME Organized: None
Services
Blood Components prepared:

	2019	2020	2021
Components	No of units		
Total Blood collection	27972	18854	19779
Whole Blood	198	159	167
Leuco poor Red cells	17945	17541	19612
Platelet Concentrate	20569	13949	15313
Fresh Frozen Plasma	25079	16146	19694
Cryo Poor Plasma	2666	1261	1397
Cryoprecipitate	2666	1261	1397
Single Donor Platelet (Plateletpheresis)	929	1085	1343

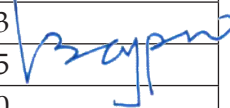
Approximately 99% of collected blood is subjected to component preparation.

No. of Components issued:

	2019	2020	2021
Components	No of units		
Red Cell units	38967	20889	25138
FFP	18764	11204	14436
Platelets	19269	13532	14151
Cryoprecipitate	2721	1096	1240
CPP	504	335	342

Percentage (%) Component issued to various department:

Departments	2019	2020	2021
Gastro-Surgery	5.5	15.9	8.01
Urology & Renal Transplantation	5.9	7.2	5.54
Nephro& Dialysis	4.2	2.8	6.91
CVTS	5.2	8.6	6.21
NeuroSurgery	9.9	13	15.5
Gastro Med.	2.9	1.3	2.6
Genetics /	19	14	16.79
Immunology/Hematology	11.6	24.7	19.50
Radiotherapy/ G. Hospital	4.1	1.5	2.18
MICU/CCM/Post op	5.8	4.3	6.13
RCH	NA	1.4	1.35
Others	25.9	6.1	9.20


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Transfusion Transmissible infection screening:

	2019	2020	2021
Marker	Prevalence		
Anti HIV 1& 2	0.6	0.44	0.38
Anti HCV	0.79	0.88	0.26
HBsAg	1.1	1.07	1.03
VDRL	0.25	0.21	0.25

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.

	2019	2020	2021
Test	No of Test		
Direct Coomb's Test	1814	896	1395
Indirect Coomb's Test	1593	697	1198
Cold Agglutinins	10	20	09
Antibody titre	1036	478	709
Antibody Screening	41	95	133
Transfusion Reaction Work up	24	22	8
PNH (Gel Cards)	59	30	38
Herpain /PF4 (HIT)	8	16	17
Blood Grouping	29007	19677	20079

Outdoor & Indoor Blood Collection Camps (2021):

SN	Site of camp	No of units collected
1	SGPGIMS (Dera Sacha Sauda)	45
2	St. Francis College	92
3	Uco Bank	31
4	CA Office Gomti Nagar Lko	55
5	SGPGIMS	12
6	Reliance Communication	13
7	Hotel Golden Tulip	47
8	Bharat Raksha Dal	32
9	Prasanna Trust	26
10	U P Diploma Engg	105
11	Chancellor Club	26
12	Rotatry Club	44
13	SGPGIMS	6
14	Boy's Anglo Inter College (Lions Club)	20

15	Mahindra & Mahindra	28
16	Airport-Indigo Airlines	5
17	Tata Motors	91
18	Mandi Pasishad (S Ganga Floor mill Baharaich)	85
19	Aasiyana Gurudwara	36
20	Aryakul College (Jaggi)	47
21	HDFC Kanpur (Maharan Pratap Eng. College)	100
22	Hazarat Ganj Tredors	68
23	K K C P G College	42
24	Islamia Degree College Lalbagh	29
25	Gurugovind Singh Study Circle Ramnagar Alambagh Lko	27
26	South City Lko	60
27	Hotel Golden Tulip	42
28	Hotel Piccaddily	30
29	Sunny Toyota	25
30	College of Agricultur Lucknow University	54
31	Tata Motors	100
32	Amar Ujala	41

Other Services:

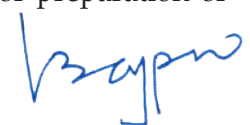
	2019	2020	2021
Therapeutic Plasma Exchanges	63	102	130
Thromboelastography	158	115	34

Training

- Total eight (08) students were pursuing MD during 2021 of which 1 appeared for exam and passed. One student completed her PDCC and one joined PDCC. One student completed MScMLT Transfusion Medicine.

Research completed during the year

- Assessment of quality and hemostatic potential of pooled platelet concentrates. **Funding:** Departmental (PI- Dr Dheeraj Khetan) **Short report:** Pooled platelet concentrates (PPCs) are prepared either by buffy-coat pooling or pooling of random donor platelets. PPCs have recently been accepted as a new components under the Drugs and Cosmetics Act. PPCs provide standardized dose without the need for an apheresis donor. In this study, quality of PPCs prepared by four different methods was compared to develop a protocol for preparation of PPCs at our center.



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Research in Progress

1. 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.
2. A pilot study on making a repository for whole blood derived convalescent plasma as an alternative to apheresis convalescent plasma from blood donors with virologic or serologic evidence of prior infection with SARS-CoV-2. **Funding:** Intramural (**PI-**Dr Anupam Verma)
3. Alternations in immune, inflammatory and endocrine responses in Indian patients with diabetes infected with SARS-CoV-2 and its clinical consequences. **Funding:** Extramural (Science and Engineering Research Board) **PI-** Dr Prashant Agarwal
4. Quality control of Fresh Frozen plasma using plasma sample taken from segment. **Funding:** Intramural (PGI) (**PI-** Dr Dheeraj Khetan)
5. 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)
6. Effect of ABO incompatibility on aggregation response of platelet components-2021-2023 **Funding:** Departmental (**PI-** Dr Dheeraj Khetan)

Publications

1. Gupta N, Khetan D, Chaudhary R, Shukla JS. Prospective Cohort Study to Assess the Effect of Storage Duration, Leuko-Filtration, and Gamma Irradiation on Cell-Free DNA in Red Cell Components. *Transfusion Medicine and Hemotherapy* 2020, 47(5):409-419
2. Khetan D, Verma A, Chaudhary R, Shukla JS. Molecular characterization of Rh D variants in north Indian blood donor population. *Transfusion Medicine* 2020, 30(4): 295-303
3. Chaudhary R, Verma S, Verma A. Prevalence of Del phenotype in D - blood donors in India. *Immuno-hematology* 2020, 36(4): 133 - 136
4. Singh B, Chaudhary R, Katharia R, Pradhan M. Prognostic Significance and Prevalence of IgG Subtypes in Rh Haemolytic Disease of Fetus and Newborn. *Indian J Hematology and Blood Transfusion* 2021, 37 (3): 442 - 447
5. Singh B, Katharia R, Das I, Srivastava A, Priyadarshi A, Elhence P, Chaudhary R. Impact of COVID-19 pandemic on the pattern of blood donation and blood safety: Experience from a hospital-based blood center in North India. *Asian J Transfusion Science* 2021, 15(2): 119 -124.
6. Singh B, Chaudhary R, Katharia R. Effect of multiple maternal red cell alloantibodies on the occurrence and severity of hemolytic disease of the fetus and newborn. *Transfusion and Apheresis Science* 2021, 60(1):102958. doi: 10.1016/j.transci.2020.102958. Epub 2020 Sep 23.
7. Singh B, Katharia R, Das I, Srivastava A, Priyadarshi A, Elhence P, Chaudhary R. Impact of COVID-19 pandemic on the pattern of blood donation and blood safety: Experience from a hospital-based blood center in North India. *Asian J Transfusion Science* 2021, 15(2): 119 -124.
8. Dubey A, Sonker Implementation of internal quality control program for monitoring of enzyme-linked immunosorbent assay performance at a blood center. *Asian J Transfus Sci.* 2021 Jan-Jun;15(1):21-29
9. Srivastava A, Kumar S, Agarwal A, Khetan D, Katharia R, Mishra P, Khati S, Gautam S and Khuba S. Evaluation of efficacy of Valsalva for attenuating needle puncture pain in first time

nonremunerated voluntary plateletpheresis donors: A prospective randomized controlled trial. Asian Journal of Transfusion Science, 2021; 15(1): 68-74.

10. Ratnakar Shukla R, Shukla P, Behari A, Khetan D, Chaudhary RK, Tsuchiya Y, Ikoma T, Asai T, Nakamura K, Kapoor VK. Roles of Salmonella typhi and Salmonella paratyphi in Gallbladder Cancer Development. Asian Pac J Cancer Prev. 2021; 22(2): 509-516.

Chapter(s) in Book(s)

1. Verma A, Hemlata, Choudhury N. Blood component therapy. In Gupta P, menonPSN, RamjiSiddarth, Lodha R Eds 2. PG Textbook of Pediatrics. New Delhi: Jaypee Brothers; 2021.

Books

Agarwal P, Memon J. Standards for Blood Centres & Blood Transfusion Services. 2nd ed. Publishers: National blood Transfusion Council; 2021

Visiting Professors: None

Awards and Honours for department: None

New Initiatives

1. Plasmapheresis of recovered Covid-19 patients for convalescent plasma was started in 2020 for the first time continued for some time in 2021 along with assessment of titre of IgG antibodies against SARS CoV-2.
2. Thromboelastography was performed for first time on Covid patients to assess their coagulation status.
3. Introduction on Pooled platelet concentrate as an alternative to apheresis platelets

Patents: None

Department Highlights

During the Covid period Department maintained the full function with due precautions to provide services to in patients and also to registered patients admitted elsewhere. Both online and offline teaching sessions were held. Department faculty and Residents performed duties in Covid wards & also held tele-consultations.



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DEPARTMENT OF UROLOGY

STAFF

Name of Faculty Members:

1. Dr Aneesh Srivastava, MS, MCh, MAMS	Professor & Head
2. Dr M.S. Ansari, MS, MCh, MNAMS, DNB	Professor
3. Dr Uday Pratap Singh, MS, MCh	Associate Professor
4. Dr. Sanjoy Kumar Sureka, DNB, MCh	Assistant Professor
5. Dr. Priyank Yadav, MS, MCh	Assistant Professor
6. Dr. Naveen Kumar Gautam, PhD	Assistant Professor (Basic Science)
7. Dr. Sanchit Rustagi, MS, MCh	Assistant Professor (Contractual from 03.06.2021)

Awards & Honour:

1. Dr. Sanjoy Sureka conferred "Talent Award" during NZ-USI in 2021.
2. Dr. Priyank Yadav awarded "First Prize" for Robotic Bilateral Intravasical Ureteric Reimplantation in Children : Initial Experience with Da Vinci XI system" during annual conference of NZ-USICON 2021.
3. Dr. Prabhu received 1st & 2nd Prize for Best Paper Presentation Award during the PESICON 2021 conference.
4. Dr. Sumit Mandal received 1st Prize for Best Poster Award during the NZUSICON 2021.

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.

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"



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Dr. Sanjoy Kumar Sureka

- Indian Journal of Urology
- BMJ Case Report

Services :
OPD Data

Year	2019	2020	2021
New Patients		2240	5130
Old Patients		6469	23072

Ward Statistics

Year	2019	2020	2021
Ward Admissions		924	1730
Ward Discharges		924	1730

OT Data

Year	2019	2020	2021
Endourology		135	161
Uro-radiology		492	48
Pediatric Urology		199	285
Uro-oncology		81	65
Renal Transplant		45	78
a. Open Donor Nephrectomy		3	19
b. Lap Donor Nephrectomy		42	59
c. Cadaveric Transplant		00	00
Transplant related procedures (AVF, CAPD)		206	166
Urethroplasty		18	96
Andrology		01	00
Female Urology		04	42
Laparoscopic Urology		141	55
Misc Procedures		113	178
Stone Centre procedure		8685	10906

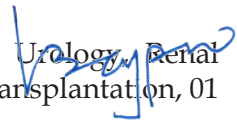
Teaching & Training:

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).


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Ph.D. Urology program is actively running in the department with a present strength of 01 student.

Research Project:

Extramural:

1. Study the toxic effects of exposure to Bishenol A and Dibutyl phthalates on renal organ and identification of potential therapeutics for its mitigation by using *Drosophila melanogaster* model organism.

Intramural:

1. Development of non-invasive biomarker for early diagnosis of clear cell renal cell carcinoma (ccRCC) and identification of therapeutic target for the disease.
2. PDE-5 inhibitor Tadalafil as anti-inflammatory and anti-fibrotic agent for improving bladder dynamics in cases of posterior urethral valve.
3. Detecting long non-coding RNA biomarkers in prostate cancer liquid biopsies.

Publications:

1. Ansari MS, Shekar PA, Singh C, Joshi SS. The Urological Society of India Guidelines for the management of pediatric urinary tract infection (Executive Summary). *Indian J Urol.* 2021 Jan-Mar;37(1):10-12.
2. Mandhani A, Mittal V, Bhaskar V, Srivastava A. Prostate-specific antigen screening of men with lower urinary tract symptoms (opportunistic screening) and of asymptomatic men undergoing executive health check; An audit from two institutions. *Indian J Urol.* 2021 Apr-Jun;37(2):159-162.
3. Jena R, Narian TA, Singh UP, Srivastava A. Role of positron emission tomography/computed tomography in the evaluation of renal cell carcinoma. *IJU* 2021 Apr-Jun;37(2):125-132.
4. Jena R, Shrivastava N, Sharma AP, Choudhary GR, Srivastava A. The adequacy of pelvic lymphadenectomy during radical cystectomy for carcinoma urinary bladder: A narrative review of literature. *Front Surg.* 2021 Jun 17;8:687636.
5. Jena R, Sureka SK, Singh UP. Upper Tract Transitional Cell Carcinoma clinically mimicking inflammatory renal pathology: A report of three cases. *IJU: Journal of Urological Society of India.* 2021;37(3):234-240.
6. Kumar M, Rustagi S, Jena R, Singh UP, Ansari MS, Srivastava A, Kapoor R, Sureka SK. A prospective randomized study to define the role of low dose continuous prophylactic antibiotics and anti-adherence agent in altering the microbial colonization related to indwelling Double-J stent. *Asian J Urol.* 2021 Jul;8(3):269-274.
7. Prasad TK, Sood R, Srivastava A, Krishnamoorthy V, Gupta M, Rizvi JS, Vaddi SP, Javali T. Laparoscopy training status in Indian and a review of the current resident skill standards. *Urol Ann.* 2021 Oct-Dec;13(4):412-417.
8. Yadav P, Danish N, Sureka SS, Rustagi S, Kapoor R, Srivastava A, Singh UP. Permanent perinealurethrostomy for anterior urethral stricture: A critical appraisal of long-term outcome and erectile function. *Turk J Urol.* 2021 Mar;47(2):158-163

Case Report: NIL

Book Chapter & Citation: NIL

Conference/CME/Workshop organized: NIL



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ALUMINI DAY

Second alumni day was celebrated in the afternoon of 13th December 2021. Director, Prof RK Dhiman presided over the program along with dean Prof Aneesh Srivastava, both are one of the early alumni of the institute. It was a hybrid meeting and about 100 alumni joined virtually or physically. The program began with Prof Dhiman remembering his days as a DM student in gastroenterology where in addition to the academics the environment was of camaraderie and the institute was one big family. Prof Srivastava while introducing the first speaker, Prof Diwakar Dalela spoke of the life and training in the early days in SGPGI. Prof Mahendra Bhandari mentored both Profs Srivastava and Dalela and not only taught them urology but made them understand the importance of balancing work with family life, which has stood them in good stead. Prof Dalela with his vast experience as a teacher and practitioner gave tips about good professional conduct, an important lesson for upcoming doctors. Prof Madan Godbole introduced his protégé Dr Naibedya Chattopadhyay, currently scientist at CDRI. Prof Chattopadhyay strongly advocated that to improve the research standard and output in our country, leaders of science have to be more vocal so that science policies and announcements made are implemented and funding for research as promised is increased. Something which is a norm in the US. Prof Shubha Phadke spoke about her journey of 3 decades of establishing department of Medical Genetics, the first in the country, the ups and downs she has faced. She was fondly introduced by her student and now a friend Prof Ratna Puri from Delhi. Dr Pooja Ramakant succinctly outlined how the SGPGI alumni association can be a two-way street. She was introduced by her teacher Prof Amit Agrawal. The program ended with Prof Preeti Dabadghao outlining the course of action to be taken by the alumni cell to make the association vibrant.

We hope to continue and expand this tradition in the coming years.



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APEX TRAUMA CENTER

STAFF

Name of Faculty Members:

1. Prof. Raj Kumar, MS, MChPHD MRCS, FRCS, FAMS, FNS, MAMS, MNASc, FASET, DSc	Prof. & Chief of department
2. Dr. Rajesh Harsvardhan, M.D. M.D., DNB, MPH, LLB, MNAMS, DMLE, PGDHA, DGM	Addl. Medical Superintendent
4. Dr. Amit Kumar Singh, M.S. MCh	Assoc. Prof. Trauma Surgery
5. Dr. Anurag Baghel M.S.	Assoc. Prof. -Orthopaedics
6. Dr. Amit Kumar M.S.	Assoc. Prof.- Orthopaedics
7. Dr.Kumar Keshav M.S.	Assoc. Prof.- Orthopaedics
8. Dr. Pulak Sharma M.S.	Assoc. Prof.- Orthopaedics
9. Dr. Kuldeep Vishwakarma M.D.S.	Assoc. Prof.-Oral and maxillofacialsurgery
10. Dr. Siddharth Rai M.D.	Assoc. Prof.-Physical medicine and rehabilitation
11. Dr. Awale Rupali Bhalchandra M.D.	Assoc. Prof.- Laboratory Medicine
12. Dr. Sangram Singh Patel M.D.	Assoc. Prof.-Microbiology
13. Dr. Ganpat Prasad M.D.	Assoc. Prof.-Anaesthesia
14. Dr. Prateek Singh M.D.	Assoc. Prof.- Anaesthesia
15. Dr. Rafat Shamim M.D.	Assoc. Prof.- Anaesthesia
16. Dr. Suruchi M.D.	Assoc. Prof.- Anaesthesia
17. Dr. Vansh Priya M.D.	Assoc. Prof.- Anaesthesia
18. Dr. Kamlesh Singh Bhaisora M.S., MCh	Assoc. Prof.- Neurosurgery
19. Dr. Pawan Kumarverma M.S., MCh	Assoc. Prof.-Neurosurgery
20. Dr. Ved Prakash Mourya M.S. MCh	Assoc. Prof.- Neurosurgery

Activities

The details of various awards and honours, along with various conferences attended is listed below.

Specialty wise faculty data

- Trauma Surgery

Dr Amit Kumar Singh

Invited faculty:

1. ISTAC 2021

Member of society:

1. Association of Surgeons of INDIA



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2. Indian Associations of Paediatric Surgeons

Member editorial committee/ Reviewer of Journal:

- (a) Urology Annals PubMed indexed international Journal of urology
- (b) Journal of Integrative Neuroscience

Executive of National/ International bodies: Nil

Publications in indexed journals (Articles): 01

Workshop/CME

1. Conducted Workshop on Advance Wound care program for Residents & Nursing Staff

Book chapters in Various Textbooks: Nil

- **Orthopaedics**

Dr. Pulak Sharma:

Conference Presentation

1: National (1)

Clinicoradiological Outcome of Concomitant Fractures of Proximal Femur and Femoral Shaft

Treated With Second-Generation Cephalomedullary Nailing-MPIOACON 2021, 16-17 Oct 2021
Bhopal , paper presentation

Member editorial committee/ Reviewer of Journal: Reviewer of Orthopaedic Journal of MP Chapter

Workshops and CME organized:nil

Dr Anurag Baghel

- **Awards And Honours**-Awarded the prestigious fellowship by **Indian orthopaedic association**
-IOA YUVA mentor fellowship for the year 2022.

Conference Presentation : nil

Workshop and CME organized: nil

Member of society-

1. Indian orthopaedics association
2. UP orthopaedic association
3. International society for knowledge of hip and knee surgeon (ISKSSA)
4. AO Spine

Member editorial committee/ Reviewer of Journal:

1. 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



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Dr. Amit Kumar**Invited faculty:**

1. Invited as External examiner for MTech thesis entitled “Computational design of human foot” by IIT Delhi.
2. Thesis co-Supervisor of SOMESH KUMAR GUPTA (2020AMY7629) Department of Applied Mechanics, Indian Institute of Technology Delhi; for Master of Science (Research) on Title : A finite element investigation of various implants in fixing Pauwel’s type-3 vertical fracture of femur neck

Conference Presentation: nil

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:

- Organize Public Awareness activities on the occasion of:
- World Arthritis Day, 12th oct. 2021
- World Osteoporosis Day, 20th oct. 2021

Teaching and training

- Board of studies have been conducted for PDCC in “Pevis, Hip and Knee Injuries”

Dr. Kumar Keshav**Conference Presentations****1: National (4)**

1. Posterior dislocation of hip with ipsilateral fracture acetabulum (associated transverse and posterior wall type) managed by staged surgeries-Asia Pacific Orthopaedic Association- Young Surgeon’s Forum (APOA-YSF)-2020 (Varanasi) 19/01/2020
2. Ilizarov as a surgical modality in open fractures of proximal and distal tibia in acute setting: A prospective study of 13 cases-ASAMICON-2020 (New Delhi)27/02/2020 - 01/03/2020
3. Tuberculosis of Spine, Acetabular fractures- Radiology, Classification and approaches- U.P. Post-Graduate Instructional Course, 2021 held at Moradabad, U.P. (As Faculty)4 & 5 December, 2021.
4. “Concomitant hip and infra-isthmic femoral shaft fractures: Is a single second-generation cephalomedullary nail enough? A case series and literature review in free-paper session, “Terrible Triad injury of elbow in association with olecranon fracture: A case report and literature review of terrible triad variants” in e-poster session-66th Annual Conference of Indian Orthopaedic Association (IOACON)-2021, 21-25 December, 2021.

International (1)

1. "Ilizarov ring fixation as a surgical modality in Gustilo Anderson Grade 1-3A tibial plateau and plafond fractures in acute setting: A prospective study of 13 cases" in free paper session and "Is it "Terrible quadruple"? A case report of "Terrible triad injury of elbow" associated with olecranon fracture managed surgically" short free paper session-41stSICOT Orthopaedic World Congress- 2021 (Budapest, Hungary) 15-18 September, 2021

Awards And Honours

1. Invited as Faculty for Case Presentation in Asia Pacific Orthopaedic Association- Young Surgeon's Forum (APOA-YSF)- 2020 (Varanasi)- "Posterior dislocation of hip with ipsilateral fracture acetabulum (associated transverse and posterior wall type) managed by staged surgeries."
2. 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
3. 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.
4. Was invited as faculty in U.P. Post-Graduate Instructional Course, 2021 held at Moradabad-

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:

Assistant editor - Journal of Bone and Joint diseases (Official journal of U.P. Orthopaedic Association)

Reviewer - Injury

- i. **Journal of Bone and Joint diseases** (Official journal of U.P. Orthopaedic Association)

Workshops and CME organized-

Organized 2 public awareness programmes on the occasion of -

- a. World Arthritis Day, 12th Oct. 2021
- b. World Osteoporosis Day, 20th Oct. 2021



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C- Oral & Maxillofacial Surgery**Dr. Kuldeep Vishwakarma:****Invited faculty: nil**

Conference Presentation/ Workshop: nil

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:

9. Reviewer (National Journal of Oral & Maxillofacial Surgery)

Workshops and CME organized: nil

Book chapters in Various Textbooks: nil

D-Physical Medicine & Rehabilitation-

10. **Dr Siddharth Rai :**

Invited faculty:

1. Indian Association of Physical Medicine & Rehabilitation Mid term CME 2021
2. Indraprastha Association Of Physical And Rehabilitation Medicine, Clinical Meet 2021
3. Head and Neck Oncology Summit, 2019.
4. NeuroRehabilitation CME 2021, AIIMS Deoghar

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 organized: nil

E- Laboratory Medicine

Dr. Awale Rupali Bhalchandra

Invited faculty:

- a. Indian Society of Trauma and acute care 2021

Conference Presentation

1. COVID-19 associated coagulopathy - laboratory analysis of a unique coagulation dysregulation- 16th Annual Asian Association of Transfusion Medicine congress Jaipur 4.12.2021

Workshops and CME organized: nil



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Member of society

1. Association of Indian Journal of Pathology and Microbiology.
2. Indian Association of Laboratory Physicians
3. Indian Society of Haematology and Transfusion Medicine
4. Indian Academy of Cytologists
5. Indian Society for Trauma and Acute Care

Member editorial committee/ Reviewer of Journal:

- a) British Medical Journal case reports
- b) Transactions of The Royal Society of Tropical Medicine and Hygiene
- c) 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

Microbiology**Dr Sangram Singh Patel****Invited faculty :**

1. External examiner at BHU Varanasi, Hind Institute of Medical Sciences, Barabanki for MBBS and BDS students

Conference Presentation

A. Presented poster on . "Levonadifloxacin a novel approved drug exhibiting potent in vitro activity against Gram positive bacterial isolates from intensive care units." - ASPICON-2021 at AIIMS Patna from 03/12/2021 to 04/12/2021

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: nil

Teaching and training

- (a) Actively involved in MD, PhD and PDCC, CMT students teaching.

F- Neurosurgery**Dr. Kamlesh Singh Bhisora**

Conference Presentation- nil

Workshops and CME organized: nil



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Dr. Pawan Kumar Verma:**Awards and honours:**

1. 2nd Best paper award in UP-UK NEUROCON 2021

Workshops: Nil

Membership:

3. Indian society for Stereotactic and Functional Neurosurgery
4. Indian Society of Neuro-oncology

Dr. Ved Prakash Maurya**Awards and Honours**

- Invited Faculty for case presentation on Complex Spinal Dysraphism in ISPN Virtual Education Course 2021; India, 3rd- 4th July 2021.
- Awarded internal membership of American Association of Neurological Surgeons (AANS), August 2021.
- Received BEST Research Paper Award (Surgical Category) as Assistant Professor for the year 2021 on 2nd Research Day (13th December 2021)- SGPGIMS, Lucknow.
- Selected as Instructor/ Faculty for the Advanced Trauma Life Support (ATLS) for ATLS training at KGMU, Lucknow (India).

Editorial board

9. Selected as Section Editor in official Journal of NSI- Neurology India.

Executive of National/ International bodies

1. Member of Executive Committee in Young Neurosurgeons Forum in Neurological Society of India (YNFNSI).
2. Life member of Indian Society of Paediatric Neurosurgery (IndSPN)
3. International Society for Paediatric Neurosurgery (ISPN)
4. Life member of Neurological Surgeons' Society of India (NSSI)
5. American Association of Neurological Surgeons (AANS)
6. Congress of Neurological Surgeons (CNS)
7. Skull Base Surgery Society of India (SBSS)
8. Life member of Neurology India (NI)

Reviewer

1. Indian Journal of Neurosurgery (IJNS)
2. Neurology India (NI)
3. Indian Journal of Neurotrauma (IJNT)
4. Journal of Neurosciences in Rural Practice (JNRP)
5. Journal of International Medical Research (JIMR)
6. Journal of Paediatric Neurosciences (JPN)
7. World Neurosurgery



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Conference Presentations

1. Post traumatic cervical locked facets-the initial experience of circumferential fusion-30th Annual Conference of Neurotrauma Society of India (NTSI-2021), Madurai, India. 27th-28th August 2021. (Virtual Platform)
2. Management of cervical locked facets: a tertiary centre experience-Annual Neuro Spinal Surgeons Association Conference (NSSA-2021). Bhubaneswar, India. 17th- 19th September 2021. (Virtual Platform)

Services:

Emergency patient receiving area

	2021	2020	2019
Admission	123	1077	742
Discharge	17	203	139

Trauma Surgery

		2021	2020	2019
Surgical procedures	Major surgeries	05	28	90
	Minor surgeries	13	83	157

Neurosurgery

		2021	2020	2019
Surgical procedures	Major surgeries	35	177	278

Oral & Maxillofacial Surgery

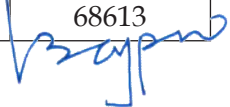
		2021	2020	2019
OPD registrations	New registrations	204	87	132
	Follow up	903	220	450
Surgical procedures	Major surgeries	11	10	55
	Minor surgeries	50	21	122

Physical Medicine & Rehabilitation

		2021	2020	2019
OPD registrations	New registrations	595	122	356
	Follow up	1430	345	212

Laboratory Medicine

Year	2021	2020	2019
Number of Test Parameters Processed	2,20,466	311571	68613


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Microbiology

Year	2021	2020	2019
Number of Test Parameters Processed (For trauma center)	140	767	24,456

Orthopedics

OPD registrations	2021	2020	2019
New registrations	804	245	989
Follow up	3190	1555	750
Consultation (Referral)	849	156	545
Plaster application & removal	-	88	434
Dressing	-	122	678
PRP injection	-	-	-
Surgical procedures Surgery	131	109	654

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 2021-22 : Nil**

Research in progress : Nil

Publications

Publications in indexed journals (Articles)

1. Singh A, Prasad G, Mishra P, Vishkarma K, Shamim R. Lessons learned from blunt trauma abdomen: Surgical experience in level I trauma centre.. Turk J Surg 2021; 37 (3). 277-285.
2. Testicular fixation and its effect on ipsilateral and contralateral testis in prepubertal rat model. Singh A, Srinivas M, Saumyaranjan M. Afr J urol 2021; 27:103-104.


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3. Bajpai M, Baba A, Singh A. Postablation and α -1 blocker therapy in children with congenital obstructing posterior urethral membrane. *Formos J Surg* 2021;54:7-10.
4. 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.
5. 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)
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*, [S.I.], v. 8, n. 7, p. 962-968, June 2021. ISSN 2349-3933.
7. 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*.
8. Uppal H, Chaudhary S, Rai S. Assessment of Intensive Inpatient Rehabilitation Program in Acquired Brain Injury Patients using UK FIM+FAM Scale: A Retrospective Study. *JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH* [Internet]. JCDR Research and Publications; 2021; Available from: <http://dx.doi.org/10.7860/jcdr/2021/49437.15280>
9. Awale RB, Rai S, Gunjiganvi M, Mishra P, Nath A, Singh RK. Morphological Changes in Peripheral Blood in COVID-19 Infection. *Int Arch BioMed Clin Res.* 2021;7(4):LM1-LM6.
10. Shukla S, Husain N, Kaif M, Awale RB, Mishra S, Malhotra KP. Programmed Death Ligand-1 Expression in Gliomas: A Study of Histopathological and Molecular Associations. *Neurology India* 2021;69(4):1005-1009.
11. Rai S, Gunjiganvi M, Awale RB, Uppal H. Early rehabilitation intervention is associated with significant positive functional outcomes in traumatic brain injury: A Retrospective analysis. *Int J Adv Med.* 2021; 8(7):21-24.
12. 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).
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. 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).
15. Baghel A, Keshav K, Kumar A, et al. (June 01, 2021) Clinico-radiological Outcome of Concomitant Fractures of Proximal Femur and Femoral Shaft Treated With Second-Generation Cephalomedullary Nailing. *Cureus* 13(6): e15381. DOI 10.7759/cureus.15381
16. Keshav K, Sharma P, Kumar A, Baghel A, Kaustubh K, Huda N, et al. Changing practices of delivering orthopedic and coronavirus disease 2019 care: Outcome of a pan-India survey. *J Bone Joint Dis* 2021;36:27-32.
17. 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

18. Keshav K, Kumar A, Sharma P, Baghel A, Mishra P, Huda N. How Much has COVID-19 Pandemic Affected Indian Orthopaedic Practice? Results of an Online Survey. *Indian Journal of Orthopaedics*. 2020;54(2):358-67.
19. Ranjan N, Sharma P, Baghel A, Keshav K, Kumar A. Epidemiology of Orthopaedic Trauma in the Geriatric patients admitted in a tertiary care trauma centre in northern India. *Journal of Bone and Joint Diseases* 2020;35(2):5-8.
20. Ahmed A, Jilani LZ, Asif N, Khan AQ, Kumar V, Keshav K. Unilateral total hip arthroplasty in bilateral ankylosed hips: A case-series of eight patients of ankylosing spondylitis. *Journal of Arthroscopy and Joint Surgery* [Internet]. 2021; Available from: <https://www.sciencedirect.com/science/article/pii/S2214963521000092> (As corresponding Author)
21. Baghel A, Keshav K, Kumar A, Sharma P. Clinicoradiological Outcome of Concomitant Fractures of Proximal Femur and Femoral Shaft Treated With Second-Generation Cephalomedullary Nailing. *Cureus* 2021;13(6):e15381. doi: 10.7759/cureus.15381. PMID: 34249534; PMCID: PMC8249989. (As corresponding author) <https://doi.org/10.7759/cureus.15381>.
22. Keshav K, Sharma P, Kumar A, Baghel A, Kaustubh K, Huda N, et al. Changing practices of delivering orthopedic and coronavirus disease 2019 care: Outcome of a pan-India survey. *J Bone Joint Dis* 2021;36:27-32. <http://www.jbjd.org/text.asp?2021/36/2/27/322946>
23. Huda N, Bishnoi S, Shahid M, Keshav K, Altaf D, Kumar K. Joshi's external stabilization system versus locked compression plating in the management of tibial plateau fractures: A nonrandomized prospective study. *J Bone Joint Dis* 2021;36:14-20. <http://www.jbjd.org/text.asp?2021/36/2/14/322950>
24. Keshav K. Giant Periosteal Chondroma of proximal humerus extending on both sides of axillary nerve managed by surgical excision through shoulder strap incision: A case report. *Journal of Bone and Joint Diseases* 2020;35(2):50-52.
25. Keshav K, Das LK, Kumar S, Singh S. Pseudomonas clavicular osteomyelitis managed by subtotal clavicular excision: A rare case report and literature review. *Journal of Bone and Joint Diseases* 2020;35(3):52-54.
26. Keshav K, Kumar A | An Anatomical Variation of Sciatic Nerve Encountered during Kocher-Langenbeck Approach to the Acetabulum: A Case Report | *Journal of Bone and Joint Diseases* | January-April 2021;36(1):38-40.
27. Keshav K. Starvation in the midst of plenty: Are we orthopaedic surgeons smart enough? *Journal of Bone and Joint Diseases* 2020;35(3):1-2.
28. Keshav K. Incorporating clinician-assessed and patient-reported outcome measures in routine orthopedic practice. *J Bone Joint Dis* 2021;36:45-7.

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.

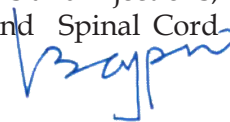
Neurosurgery : Successfully performed life-saving brain surgeries for over 400 patients, including intricate procedures such as tumor resections and complex spinal surgeries. Pioneered the use of innovative neuroimaging techniques, allowing for more accurate diagnosis and targeted treatment planning. 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.

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 .



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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.



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CAMPUS DEVELOPMENT ADVISORY COMMITTEE

1. **Garbage disposal in residential area:** Several brainstorming sessions were done with the aim of achieving 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.
2. **Monkeys in the campus:** District forest officer, and the DM of Lucknow were brought into the loop to help us address this menace to patients as well as to residents of the campus.
3. **Stray dogs:-** Efforts were made to contact a local NGO to send teams to humanely catch and neuter the dogs and bring them back to the campus after healing from surgery.
4. **Speed breakers, benches for senior citizens and signages:** Members of CDAC had identified the spots where relevant signages and benches are needed.
5. **Community centre:** A letter was issued from the office of Director, to shops in the community centre, warning not to keep tobacco products due to location near schools; as well as to heed the governments ban on plastic bags.
6. **Swings and slides for young children:-** It was decided that there is a great need to repair and replace the swings & slides in the old campus and provide new ones in the MRA as well as the new campus.



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COLLEGE OF MEDICAL TECHNOLOGY AND ALLIED HEALTH SCIENCES

Staff of CMT

Sl No.	Name of Staff	Designation
1	Prof. Sanjay Gambhir	Nodal Officer
2	Dr. Manish Dixit	Additional Nodal Officer
3	Mr. Rajesh Tiwari	UDA
4	Mr. Amit	Senior Technical Officer
5	Mr. Alok Srivastava	DEO(Contractual)
4	Ms. Shivani Pal	DEO(Contractual)
5	Mr. Vinay Yadav	DEO(Contractual)
6	Mrs. Arti	DEO(Contractual)

1. Awards, Honours, and Recognitions - Nil.

2. 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 12 courses, which include 9 B.Sc., 03 M.Sc. courses.

3. Training:

The College of Medical Technology, SGPGI, was established in July 2018 with the aim to training students of different paramedical fields. Currently, the College is running 12 courses, which include 9 B.Sc., 03 M.Sc. courses. Each course is headed by a course – coordinator, who looks after the teaching and training of the students. Guest faculties are enrolled as per the requirements, who are involved in the training programs. 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.

Currently 03 batches of BSc and MSc students have been enrolled in different courses run in the college. The Institute has a sanctioned strength of 125 seats in different courses and till 15th May a total of 94 students were enrolled in the various B.Sc. courses. The first Batch of 6 M.Sc. students passed out in 2021. Exit examination of the 1st year and 2nd year have been carried out and the results were declared.

The admission of students in different courses in the year 2021 is provided below -

S. No.	B.Sc. Courses	Students enrolled
1	B.Sc. in Operation Theatre Technology	0
2	B.Sc. in Renal Dialysis Technology	2
3	B.Sc. In Anaesthesia Technology	0
4	B.Sc. in Radio-diagnosis and Imaging Technology	10


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5	B.Sc. in Radiotherapy Technology	3
4	B.Sc. in Respiratory Care Technology	0
5	B.Sc. in Medical Laboratory Technology (Hematology)	3
6	B.Sc. in Perfusion Technology	3
7	Bachelor of B.P.T.	6
8	B.Sc. in Operation Theatre Technology	0
9	B.Sc. in Renal Dialysis Technology	2
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

4. **Research Completed: Nil.**

5. **Research in Progress: Nil.**

6. **Publications: Nil.**

7. **Visiting Professors: None.**

8. **Awards and Honours: None.**

9. **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. Recruitment of manpower in CMT viz, Tutors and Lecturers, as per the sanctioned GO.
2. To create new faculty posts in the College for recruitment of the Principal, teaching and administrative staff to ensure smooth functioning of the College.
3. To carry out academic and other annual activities in the college, which have been held back due to the Covid Pandemic.
4. To propose and process the 'stipend' which should be paid to the students in their internship.
5. There is a dire need to strengthen the paramedical services in the country and the College has sufficient infrastructure to train students in these fields. The College plans to initiate new courses in M.Sc. as below after due approvals from the Governing body and Government.
 - a. M.Sc. in Nuclear medicine
 - b. M.Sc. Radio pharmacy and Molecular Imaging
 - c. M.Sc. Molecular Medicine and Medical Biotechnology
 - d. M.Sc. In Genetics Counselling
 - f. Diploma in Telemedicine and Digital Health

10. **New Initiatives: None.**

11. **Patents: None.**



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COLLEGE OF NURSING

STAFF

Name of Faculty Members:

1	Mrs. Usha Rani	Acting Principal & Lecturer	M.Sc. Nursing , Speciality (Community Health Nursing)
2	Mrs. Shabana Khatun	Lecturer	M.Sc. Nursing (Medical Surgical Nursing)
3	Mr. Yadidya	Lecturer	M.Sc. Nursing (Community Health Nursing)
4	Ms. Alice Joseph	Tutor	B.Sc. Nursing
5	Mrs. Pushpa Singh	Tutor	B.Sc Nursing
6	Dr.Suman Lata Dubey	Teaching Staff	M.Sc. Nursing Medical Surgical Nursing)
7	Mrs. Bhumika Singh	Teaching Staff	M.Sc. Nursing (Midwifry Nursing)
8	Mrs. A.MerlinChimma	Teaching Staff	M.Sc. Nursing Medical Surgical Nursing)
9	Mr.K.Halemani	Teaching Staff	M.Sc. Nursing (Child Health Nursing)
10	Mr. Vinod Kumar Gupta	Teaching Staff	M.Sc. Nursing (Community Health Nursing)
11	Mr. Auchitya Sharma	Teaching Staff	M.Sc. Nursing (Mental Health Nursing)

Activities

Awards and Recognitions

Not available

Invited sessions and chairpersons/lectures for Conferences: 2021

Name of faculty and Session

- Mrs. Shabana Khatun: 31st Oct. 2021 3rd Conference on Cardio Vascular Surgeon Progressive Welfare Association which was organized by RMLMI, Lucknow.

Membership of Societies

Membership of professional bodies funded by Institute

- Mrs. Shabana Khatun: TNAI
- Mr. Yadidya: TNAI
- Ms. Alice Joseph : TNAI
- Mrs. Pushpa Singh: TNAI, SOMI
- Dr. Suman Lata Dubey: TNAI
- Mrs. Merlin Cheema: TNAI
- Mrs. Bhumika Singh: TNAI, SOMI, NRSI, HISI
- Mrs. Bhumika Singh: TNAI
- Mr. Vinod: TNAI
- Mr K Halemani : TNAI
- Mr. Auchitya : TNAI



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Teaching Workshops/ CME's organized 2022/ FDP

NA

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

Training

1. Total 164 B.Sc. Nursing students .
2. Number of students appeared in the final year examination (B.Sc. Nursing) :38
3. Number of students who passed in final year examination (B.Sc. Nursing): 35

Research projects (Without Funding only)**Completed**

1. Mrs. Shabana Khatun: A descriptive study to assess the level of burden among caregivers of patients with neurological disorder in selected neurological settings (neurology ward, neurosurgery ward and neurosurgery ICU) of SGPGIMS, Lucknow, U.P, India.
2. Mr. Yadidya :A study to assess the level of knowledge regarding MRSAI (Methicillin resistant staphylococcus aureus infection) among the nurses working in selected ICU setting at SGPGIMS, Lucknow.
3. Mrs. Merlin Cheema : A descriptive study to assess the knowledge regarding Breast cancer and practice of breast self examination in women of rural areas ,Mohanlalganj , Lucknow.
4. Mrs. Bhumika Singh: A Study to assess the knowledge on Hand Hygiene among newly recruited nursing staff in SGPGIMS, Lucknow”.
5. Mr. K Halemani: A descriptive study to assess the knowledge of cancer patients on radiation therapy and its side effects who are admitted first time in department of oncology at SGPGIMS, Lucknow
6. Mr. Vinod Kr gupta: A study to assess the knowledge regarding cervical cancer among women in rural areas of Mohanlalganj, Lucknow.
7. Mr. Auchitya Sharma: A study to assess the knowledge on weaning among the mothers of infants in the department of neonatology at Sgpgims, Lucknow

Research in progress

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, UP.
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

Publications

Research publications:

1. **Halemani K, Cheema AM, Khatun Shabana.** Psychological Factors and Acceptance Rate at Early Stage of COVID-19 Vaccine : A questionnaire-based survey study Original Article Psychological Factors and Acceptance Rate at Early Stage of COVID-19 Vaccine : A questionnaire-based survey study. Int J Pediatr Nurs [Internet]. 2021;7(October):10–6.
2. **Halemani K, Shashidhara YN, D'Souza SRB.** An Evaluative Study to Assess the Effectiveness of a Video-Assisted Teaching Module on Knowledge and Practice Regarding Home-Based Colostomy Care of Children Among Primary Caregivers in Selected Hospital Lucknow, Uttar Pradesh. Indian J Surg Oncol [Internet]. 2021 Mar;12(1):146–51. Available from: <https://pubmed.ncbi.nlm.nih.gov/33814845/>

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

Visiting Professors: NA

Departmental Highlights

1. New academic session 2020-2021 of B.Sc. Nursing course was started on 11th December 2020 & 40 students were admitted against the allotted seat of 40 by Indian Nursing Council. AICTE with joint collaboration with Indian Nursing Council selected College of Nursing, SGPGIMS, Lucknow to admit Under Prime Minister Special Scholarship Scheme for J&K Students Since 2016 and 01 student got admitted under this scheme in the session 2020-2021.
2. B.Sc. Nursing 4th year, 08 passed out students of session 2019-20 will be awarded B.Sc. Nursing degree on 27th Convocation Day.
3. Total teaching faculty 05 and 06 Nursing staff in-sourced from hospital.
4. 39 Pass out final year students list in year 2021 name sent to SPMU, NHM for the placement for the post of contractual Community Health Officer, National Health Mission, Uttar Pradesh.
5. Campus interview were organized by Tata Memorial Center, Banaras conducted for B.Sc. Nursing 4th year students in year 2021
6. Ms. Manshi Yadav, B.Sc. Nursing 3rd year student awarded with **First Prize** in inter college virtual **Poem Recitation** Competition in English Language which was organized by **Subharati University, Meerut on World No Tobacco Day on 31st May 2021.**

New Initiatives

1. To start M.Sc. nursing Program- under progress
2. Recruitment of Principal, Lectures and Tutors for College of Nursing.



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ENGINEERING DEPARTMENT

The following construction works/projects were ongoing in year 2021

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	32598.74
2	Research Student/Married residents hostel (100 Nos.)	2581.75+ GST
3	Advanced Ophthalmic Centre	5711.56
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	Doctor's Canteen for Residents	313.34
7	Upgradation of Fire fighting in Main Hospital buildings	2911.12
8	Construction of 33/11 KV (02 Nos) substations	1035.05
9	Construction of type-III Nurses flats-80 Nos (G+10) storeyed.	2892.33 +GST
10.	Extension of VIP Patient guest house (PRA-I)	779.38+GST
11	Construction of 200 bedded hostel for C.M.T students	1215.21 +GST
12	Extension of Bronchoscopy lab at PMSSY Block.	306.75
13	Provision of R.O. Plant for Dialysis & Drinking water in Nephology department.	1710.24

*The following works/projects were completed in year 2021 and are in use of the institute.

S. No	Name of Projects/Works(Ongoing)	Cost approved by the Govt. (Rs. in lacs)
1	Extension of Diagnostic block /c lift lobby etc.	1708.67 +GST
2	New Married Doctor's Hostel (200 Nos.)	5474.67 +GST
3	Upgradation of old generators 1000 KVA (03 Nos.) by installation of new 1250 KVA (03 Nos) generators	413.24+GST
4	26 Nos. New lifts installation	1078.91



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GENERAL HOSPITAL

STAFF

Name of Doctors:

1. Piyali Bhattacharya, MBBS, MD (Pediatrics)	SAG & Nodal Officer
2. Perna 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

Invited sessions as speakers and chairpersons/lectures for Conferences: 2021

Dr Piyali Bhattacharya

- Prof SN Sengupta Oration on Teachers Day at Bankura Sammilani Medical College, West Bengal
- Prof Indu Wakhlu Oration by IAP Lucknow
- Speaker for 3 programs on International Women's Day 2021
- Speaker on "Sexually dysphoric Child" at IAP Growth, Development & Behavioral Pediatrics Chapter Conference, Agra

Dr Perna Kapoor

- Speaker on Obesity the silent Epidemic and Obesity in Children and Adolescents, Lucknow
- Speaker on World No Tobacco Day (Say No to Tobacco), Lucknow
- Speaker on Women's Health, Lucknow
- Speaker on Stress Management, Lucknow
- COVID-19: Focus on relief and recovery efforts, Lucknow

Dr Brajesh Singh

- Management Algorithm for Venous Ulcer understanding through case study Lucknow.
- World Anti Tobacco Day (Before it's too late), Lucknow.

Conference Participation

Dr Anju Kumari Rani

- Webinar on pregnancy complications, organized by LOGS
- LOGS Annual day celebration
- Ovarian cancer Webinar

Membership of Societies

Dr Piyali Bhattacharya: Life Member -

- Indian Academy Pediatrics
- UP IAP



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- Lucknow Acsdemy of Pediatrics
- National Neonatology Forum (NNF)
- IMA
- Adolescent Health Academy AHA -IAP
- 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 Enviornment& 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 Kumari 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)



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- Association of Cutaneous Surgeons of India (ACSI)
- AIDS Society of India (ASI)
- Indian Medical Association (IMA)

Conference/CME/Awareness sessions organized

Dr Piyali Bhattacharya

- Virtual Nutrition Conclave-Eat right, Bite by bite at SGPGIMS
- National ADOLESCON 2021, Lucknow
- Facilitator at 1 day workshop on Crisis Management, Lucknow by Adolescent Health Academy, NSS, CWC

Dr Perna Kapoor

- World No Tobacco Day 2021
- World TB Day 2021

Services:

Total number of patients seen/admitted/operated are -

	Paediatrics	Medicine	Obs & Gynae	Surgery	Dermatology	Total
OPD	750	6219	7718	4631	5651	24969
Ward Admission	0	6	169	209	0	384
Operation Major	-	-	212	142	-	354
Operation Minor	-	-	341	173	-	514
LSCS	-	-	26	-	-	26

DOTS:

Dr Perna Kapoor

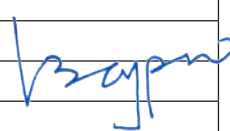
- Nodal Officer NTEP (National TB Elimination Program)

Total TB patients under treatment at SGPGI NTEP TU

Pulmonary	Extra Pulmonary	Total
85	73	158
Sputum test	AFB Positive	
512	59	

Vaccination:

Type of Vaccine	No. of recipients
PCV-13	67
PPSV-23	37
Influvac	203
Hep-B	76
HPV	118
Immunoglobulin AR	27


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ARV	275
Others	741
Total	1544

Sample Collection

Type of Investigation	Total Number
Blood sample	11800
Pus sample	610
Urine R/M	3000
Stool	800
Pap smear	590
HPE	600
Blood C/S	650
Urine C/S	2610
Sputum	240
Mol. medicine	300

Training:

Dr Piyali Bhattacharya

- TOT Neonatal Resuscitation, Central Zone Neocon, Meerut.
- Resource person for session on Prevention of Covid 19 in children- a capacity building session for staff of 175 State Child Care Institutions with 460 attendees from U.P.
- On Doordarshan U.P. as expert- Discussion on Newborn Care during the Newborn Care Week 2021 with Dr Richa Pandey from UNICEF

Dr Purna Kapoor

- PDCC Microbiology Infectious Diseases Resident
- BPT (Bachelor of Physiotherapy) students
- 01 02 courses for SGPGI residents

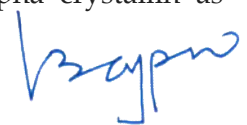
Dr Brajesh Singh

- 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

Research projects:

Dr Purna Kapoor

- Co-Investigator :ICMR Research Project: Evaluation of peripheral blood T and B cell responses to Mycobacterium tuberculosis membrane and the associated antigen alpha crystallin as 'progression biomarkers' for tuberculosis



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Thesis Co-Guide:**Dr Prerna Kapoor**

- A study to rationalize the Healthcare (clinical & 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: PG student Hospital administration

Dr Ajit Kumar

- Co-Guide for MD (Microbiology) student.

Publications:**Dr Anju Kumari Rani**

- Comparative study of mifepristone plus misoprostol and misoprostol alone for second trimester termination of Pregnancy in interenation journal of clinical Obstetrics and gynaecology 2021; 5(2): 06-09

Books/Chapter(s) in book(s)**Dr Piyali Bhattacharya**

- Academic Editor for Book "Current Trends in Diagnosis & Management for Adolescent Practitioners" released National PEDICON 2021

Dr Prerna Kapoor

- Lipid Association of India: Clinical Lipidology book chapter on Statins and heart failure, Jaypee Publications, 2021
- Textbook of cardiology: Advances in Statin Therapy (ASTC) in CVD-2022: Chapter on Pharmacogenomics of Statin Response, Jaypee Publications, 2021



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HOSPITAL ACTIVITIES FROM THE OFFICE OF CMS

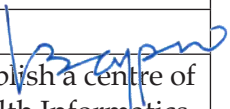
PART-A

The activities relating to personnel matters of the office of Chief Medical Superintendent are as under:-

1. During January, 2021, to December, 2021 the 37 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 43 officers/employees in their respective cadres.
3. During the above said period, 31 officers/employees of various cadres have been superannuated.
4. During the above said period, 01 MLT has been recruited.

PART-B

Sl. no.	Date	Activities /Events during January 2021 to December 2021
1.	09-01-2021	25 th Convocation of SGPGIMS celebrated.
2.	16-01-2021	1 st Vaccination drive against Covid 19 launched.
3.	25-01-2021	The Facility of Smart Card and Digital Kiosk System in Central Library launched.
4.	01-02-2021	College of Nursing, SGPGI celebrated its 13 th Foundation Day and 11 th Lamp Lighting Ceremony.
5.	16-02-2021	The department of Hepatology formally inaugurated.
6.	17-04-2021	Liquid Oxygen Plant with the capacity of 20000 liters inaugurated at RCH/ ATC.
7.	05-06-2021	World Environment Day celebrated.
8.	07-06-2021	Post Covid Clinic launched in New OPD Block.
9.	21-06-2021	International Yoga Day celebrated.
10.	27-08-2021	26 th Convocation day celebrated.
11.	31-08-2021	Deptt. Of Nephrology with Deptt. Of Urology and Renal transplantation performed the swap renal transplant first time in UP.
12.	01-09-2021	E-Office inaugurated formally.
13.	03-09-2021	Geriatric Helpdesk inaugurated formally to facilitate senior citizens visiting OPD in New OPD Block.
14.	31-10-2021/ 14-11-2021	A walkathon was organized under the aegis of SGPGI Breast Health Program and "World Diabetes Day" on 31-10-2021 and 14-11-2021 respectively.
15.	03-12-2021	On the occasion of International Day of persons with disability, a kiosk by divyang launched near PMSSY Block.
16.	13-12-2021	2 nd Research Day of the institute celebrated.
17.	14-12-2021	Institute's 38 th Foundation Day celebrated.
18.	18-12-2021	A Med Tech Centre of entrepreneurship inaugurated to establish a centre of entrepreneurship in the field of Medical Electronics and Health Informatics.


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PART-C

Details of number of new patient registration, follow-up patients and inpatient admissions etc. are given as under:

SI. No.	Particular	2019	2020	2021
1.	New Registration	117073	58720	90445
2.	Follow-up	587782	235033	381018
3.	Admission	54735	21308	35996
4.	Death	1588	1304	1670
5.	Birth	493	336	336
6.	Investigation	4629630	2166755	3157283
7.	Surgery	15195	6380	9869
8.	Open Heart Surgery	539	203	384
9.	Kidney Transplant	120	45	61
10.	Bone Marrow Transplant	12	6	21



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HOSPITAL REVOLVING FUND (HRF)

Established in the year 1997 with the approval of Institute Governing Body as a **self-sustaining supply chain** system with the motto “**Mission: Supply All**”, the Hospital Revolving Fund (HRF) has fulfilled its objective by ensuring round the clock availability of drugs and consumables in all inpatient areas, OTs and ICUs as well as in the RCH of SGPGI Hospital. HRF ensures bedside delivery of quality items (drugs, surgical items, consumables) at rates well below market prices, procured by national open tender. These services are also available for outdoor patients and at diagnostic/ intervention centers in various areas from 9.30 A.M to 7.00 P.M. dispensing of drugs and surgical items etc. is online, with full transparency and accountability. 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.

In the Academic year 2021

HRF has initiated the following prominent activities:

1. Tendering process through GeM portal has been adopted for procurement of Stationery and Laser Printer Cartridges other items etc.
2. Ophthalmology OT HRF Unit Store started successfully for patients coming for Eye Surgery.
3. HRF has started drug distribution through Hospital Information System (HIS) at HRF peripheral stores i.e. General Hospital (for staff & dependent) and OPD Pharmacy Store (for OPD patients), vide which staff and OPD patients get benefited by a message of their billing amount on their registered mobile number.
4. During second wave of COVID-19 pandemic HRF has distributed COVID medicines kit to COVID-19 positive staff and their dependents including outsourced manpower through a newly created dedicated counter for COVID-19 patients at OPD Pharmacy area.
5. In the near future HRF is fully ready to start their peripheral stores in 558 bedded ward area and 10 Operation Theatres in upcoming building of Emergency Medicine and Renal Transplant Centre. Apart from above partially HRF has started rendering their services in Emergency Medicine, Dialysis area and one operation theatre in Renal Transplant Centre.
6. The Financial Turnover during the financial year ended 149.00 Crores



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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.



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KAMDHENU ATI NIRDHAN CHIKITSA SAHAYATA SOCIETY

Kamdhenu AtiNirdhanChikitsaSahayata 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 AtiNirdhanChikitsaSahayata Society has provided financial assistance of Rs.6135000/- to 521 patients in financial year 2020-21.



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PUBLIC RELATIONS DEPARTMENT

STAFF

Name of Staff Members:

1. Kusum Yadav	Public Relations Officer
2. Meena Jauhari	Public Relations Officer
3. Shamola A Singh	Asstt Public Relations Officer
4. Ajay P Ojha	Asstt Public Relations Officer
5. Ravi Singh	Asstt Public Relations Officer
6. Ajay Tiwari	Junior Reception Officer
7. R K Gupta	Junior Reception Officer
8. Ajay Yadav	Junior Reception Officer
9. A K Soni	Junior Reception Officer
10. Kalpana Sinha	Junior Reception Officer (took voluntary retirement in October 2021)
11. Uma	Junior Reception Officer
12. Dr. Neelmani Tiwari	Junior Reception Officer
13. Manvata Bajpai	Junior Reception Officer
14. Anupma	Junior Reception Officer
15. AK Jaiswal	Junior Reception Officer
16. Manju Verma	Receptionist
17. Neelima	Receptionist

Public Relations Department in any hospital serves as an effective tool for communication between its stakeholders. Patients who reach here are physically, mentally and financially exhausted. They need to be received with proper care and empathy. Here the role of Public Relations personnel comes in. Public Relations department deals with both internal and external communication.

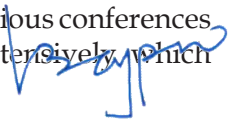
Departmental Activities:

The year 2021 witnessed the deadly second wave of Covid 19 pandemic. Services and facilities started in the first wave as per Covid protocol were again put in place. Screening counters to screen the patients, who were planned for dialysis/chemotherapy and for blood donors were made fully functional.

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 24*7 functional Help Desk was created at the entrance of Rajdhani Hospital Hospital 2 to facilitate registration and admission of Covid positive patients.

Extensive media and press coverage of the rare procedures/ surgeries was done. Various conferences and workshops organized virtually due to Corona pandemic were covered extensively which include:


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Management and treatment of Mucormycosis in Covid 19

Swap renal transplant done for the first time in UP

Wide coverage was given to the first vaccination drive against Covid 19 for frontline healthcare workers, police personnel etc.

Extensive media coverage of Institute's Research Day, Foundation Day and Convocation Day was ensured in spite of the Pandemic.

Compilation and editing of In-House journal of SGPGI Newsletter published quarterly was also done.

VIP Cell took proper care of the Honorable VIPs as per protocol.



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RAJDHANI CORONA HOSPITAL

Rajdhani CORONA Hospital (RCH): the apex level COVID Care facility for the state by SGPGI:

RCH was first physically inspected by the Honorable CM and Minister of Medical Education along with ACS prior to its commissioning.

Today, RCH is a dedicated COVID hospital with a capacity of 318 beds, of which 276 are ICU/HDU beds, and the rest are dedicated to dialysis, private beds or the Triage-3 Emergency beds.

Each ICU is well equipped with multipara hemodynamic monitors, central monitoring station, invasive and non-invasive ventilators, motorized ICU beds, dialysis machines, portable RO machines, laptop-Ultrasound, infusion pumps, enteral infusion pumps, DVT pumps, defibrillator, and ECG machines, etc. In-house CT scan and X-ray facility is also provided for. Additionally, 4 Operation Theaters and one labor room has been made fully functional for emergency procedures and deliveries.

The T3-ED that has been created is well equipped with multipara hemodynamic monitors, central monitoring station, invasive and non-invasive ventilators, motorized ICU beds, dialysis machines, portable RO machines, laptop-Ultrasound, infusion pumps, enteral infusion pumps, DVT pumps, defibrillator, and ECG machines, etc. Dialysis facility has been provided and run by the department of Nephrology for Chronic Kidney Disease COVID positive cases, admitted in RCH in T3-ED, Isolation wards and ICUs. More than 750 patients received dialysis treatment during this period in the RCH. Some of the salient activities and achievements at the RCH and the COVID Care initiatives of SGPGIMS are listed below.

Statistics of RCH (till 31st December 2020):

A total of 2313 COVID positive patients have been admitted and treated in the RCH, majority of which were elderly and those with serious and multiple co-morbidities. In spite of admitting the most difficult to treat and seriously ill patients, we could achieve an overall recovery rate of more than 85%, though the recovery rate in patients younger than 60 years was >92%. The median age of recovered patients was 52 years and those who died was 61. The recovery rate has been consistently rising month wise from April (67%) through December (>85%).

COVID management has been in accordance to the standard operating protocols (SOPs) framed by MoHFW, ICMR and as per State Government guidelines. Every patient routinely went through a 3-point triage system and further management was ascertained. The state-of-the-art ICU care for COVID-19 treatment has been provided for patients being referred from various districts of the state. Dedicated COVID Care Teams have been deputed in each clinical area of the RCH. Strict Infection Prevention and Control (IPC) measures have been adopted like centralized Donning and multiple Doffing areas have been created to ensure that not a single HCW working in RCH tests positive. Regular supervisory inside-visits by clinical area in-charges and nodal officers including the Director has ensured maintenance of quality standards.

Several satisfied COVID patients have been discharged from the RCH after their successful treatment.

Training of Health Care Workers (HCWs):

SGPGIMS has trained its HCWs, along with HCWs from 52 government and private medical colleges in the state using the Extension of Community Health Outcome (ECHO) platform. Didactic lecture modules detailing various aspects of COVID Care have been presented twice weekly. Till date 75

such sessions have been conducted and about 25,000 HCWs have benefitted from these sessions. Respected dignitaries have witnessed these sessions in person in SGPGI.

Virtual-ICU-Case-Based Rounds' with the ICU teams of 52 medical colleges of UP:

All cases admitted in COVID ICUs in these colleges are discussed in the virtual rounds. The current protocols of ICU management and upkeep issues are deliberated, with the goal of achieving a standard care at all sites. Till date 50 such sessions have been conducted. About 5000 participants have benefitted from these sessions.

Daily virtual evening clinical round of RCH:

All cases admitted in RCH are presented in these virtual rounds in the form of an interactive clinical session with the aim of fine-tuning/ optimizing the treatment. Till date more than 200 such sessions have been conducted.

HCWs training prior to COVID hospital duty:

All faculty, residents, nurses, hospital attendants and sanitary staff undergo mandatory training on Donning and Doffing steps along with Infection Prevention and Control practices to be followed at RCH. Till date we have trained approximately 2000 SGPGI staff.

Life support device skills training prior to RCH duty:

Faculty, residents, and nurses undergo mandatory training in life support device training on invasive and non-invasive mechanical ventilation, high flow nasal cannula (HFNC), oxygen therapy, vasopressors, etc before starting to work at RCH. Till date approximately 10 sessions of 2 hour each have been conducted thus far and a total of 450 participants have benefitted from these sessions.

Telemedicine services:

Tele-health system framed the foundation of eOPD and eCCS (Electronic COVID Care System).

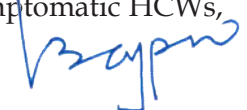
The e-OPDs were established, during the early phase of lockdown and pandemic, to minimize travel and thence exposure of patients who come for routine follow-up. A total of 33,000 consultations have been provided by the 30 clinical departments of the institute in the past 9 months. eCCS has also been provided to Doctors of the state to better manage their COVID patients.

Single point entry in the non-COVID hospital zone:

Through the State Emergency Microplan, SGPGIMS created a single point entry plan through two-step screening procedure for allowing patients to enter the non-COVID parts of the hospital. A separate Holding Area of 134 beds was created for admission of non-suspects who are mandatorily tested for COVID, and are admitted in the destination wards only after testing negative for COVID, for further management. This minimizes the chances of inadvertent admission of asymptomatic COVID patients in main SGPGI wards/ICUs, and further spread of COVID infection.

Creation of Isolation facility for HCWs:

A 50-bed facility has been created for admission of asymptomatic/minimally symptomatic HCWs, exclusively, who do not have facility for Home Isolation.



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Quarantine facilities:

The institute has created 246 beds in-house Active Quarantine Facility for the HCWs on COVID duty. Housing, food, transportation, sanitation and security of HCWs have been taken care of.

Lab, pharmacy & Kitchen:

To meet the investigation, medical/surgical item and nutritional requirements round the clock ancillary services such as a State of art 24-hour Lab service; 24 hours HRF which is an in-house pharmacy; Kitchen Services have been set up.

The department of Microbiology has provided exemplary services by routinely testing for all COVID suspected cases. Till date over 7 Lacs RT-PCR and 6500 TruNat tests have been done.

The department of Transfusion Medicine has provided convalescent plasma therapy and round the clock blood transfusion related services to seriously ill COVID patients admitted in RCH.

May I Help You Desk' and a Refreshment Center has been created for the HCWs for immediate fluid supplementation and refreshments, after the arduous duty in the COVID hospital. A small kit containing daily toiletries is being provided to all patients getting admitted in RCH for their immediate needs.

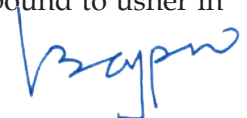
Teams of experts from SGPGI have visited the various medical colleges in the state, at Gorakhpur, Kanpur, Prayagraj, Meerut, Jhansi, and Agra, as per the directions of State Government. These teams have helped the COVID Care teams at these colleges to help prepare and implement protocols for COVID clinical management, guide improvements in COVID Hospital management, guide improvements in COVID-ICU-Care, and in formulating action plans to bring down COVID-Hospital/ICU mortalities.

Leadership role in formulating COVID Care policy and protocols for the state:

The institute has been nominated for formation of a high-level committee to provide inputs to Department of Medical Education, State Govt regarding strategies to improve COVID Care in the state and capacity building. The following advisories have been provided to the State Government regarding COVID Care: Revised Discharge Policy; Incorporation of Ivermectin in prophylaxis to HCWS and high-risk contacts; Augmentation of L2 and L3 facilities; Utilizing ECHO platforms for spread of education related programs.

Tele-ICU:

A memorandum of understanding (MoU) was signed and exchanged in presence of Honorable Chief Minister, UP, Shri Yogi Adityanathji, on 14th December, 2020, on the occasion of the 37th Foundation Day, between Power Grid Corporation India Ltd & SGPGIMS regarding creation of Tele-ICU services for the state of UP based on HUB & SPOKE model. Power Grid Corporation India Ltd under the CSR fund has generously given approximately Rupees7 Cr for this ambitious Tele-ICU project. SGPGIMS will be the HUB for this Tele-ICU service under which a Central Command Center will be created to bolster the ICU services in the 06 state medical colleges of Gorakhpur, Kanpur, Prayagraj, Meerut, Jhansi and Agra, which will be the SPOKES. Using the full potential of Telemedicine under this Tele-ICU Critical Care Service from SGPGIMS, the state will receive a major impetus towards improving the ICU services. Success gained in this segment is bound to usher in both vertical and horizontal growth in health care in the state.



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Liquid Medical Oxygen:

SGPGIMS is in the final stages of changing its oxygen supply to RCH from the Oxygen Cylinder based system to Liquid Medical Oxygen

COVID Vaccination:

The institute is actively gearing itself to institute the COVID Vaccination Drive at SGPGI for its HCWs and patients, as desired by the State Government. This will actively stem the COVID onslaught and will reduce the incidence of severe-COVID cases.

Medical Ethics is an area very dear to the Honorable Minister of Medical Education, UP Govt, Sri Suresh Kumar Khanna. Early in last year, he instructed the 04 premier medical Institutes of Lucknow, viz. SGPGIMS, KGMU, RMLIMS and the Cancer Institute to conduct a series of Programs on “Medical Ethics”, with the aim of creating awareness about issues relating to medical ethics in the minds of medical students and health care professionals, so that it is adopted on a day-to-day basis in the medical practice in the state of UP. SGPGI has initiated several such programs on monthly basis, including series of lectures on “Medical Ethics in the time of COVID-19 Pandemic”.




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RESEARCH CELL

CME/Workshops Programme List - 2021

S. No.	Title	Name of Organizing Secretary/ Chairman	Department	Date	State/ National/ International
1	Touching Basics of Nutritional Intervention ((Five sessions)	Prof. Anita Saxena	Nephrology	03.01.2021 07.02.2021 07.03.2021 04.04.2021 02.05.2021	National
2	Association of Anesthesia and Operation Theatre Technologist (AAOTT UP) 2021	Prof. Anil Agarwal	Anaesthesiology	27.02.2021	National
3	3 rd Dr. D K Chhabra & Dr. V K Jain Oration and Pediatric Neurosurgery Update"	Prof. Sanjay Behari	Neurosurgery	27 th - 28 th February, 2021	National
4	2 nd Suno Sunao 2021 (on World Hearing Day)	Dr. M. Arulalan.	Neurootology	3 rd March 2021	National
5	National Conference of Indian Society of Primary Immunodeficiency in Collaboration with KGMU	Prof. Amita Aggarwal	Clinical Immunology	06 th March, 2021 - 7 th March, 2021	National
6	Public Awareness Session for the IV class	Prof. Punita Lal	Radiotherapy, GH, MRH	8 th March, 2021	State
7	7 th Advance Course in Renal Nutrition and Metabolism (Two sessions)	Prof. Anita Saxena	Nephrology	24.04.2021 25.04.2021	National
8	NATIONAL ACADEMY OF BURNS INDIA (NABI) Mid Term Hybrid VIDEO CME	Prof. Ankur Bhatnagar	Plastic Surgery	6-7 November, 2021	National
9	Telemedicon	Nodal Officer Telemedicine	Telemedicine	12.11.2021 - 13.11.2021	International


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SGPGIMS - Drug Trial Approval Chart - 2021

S. No.	Title of Trial	Name of PI & Deptt.	IEC Clearance Date	Effective Date of CTA	Insurance Company Validity	Name of Sponser
1	A Phase 2 Multicenter, Randomized, Double-blind, Palcebo-controlled, Multiple Dose Proof of concept Study to Evaluate the Efficacy and Safety of Multiple Intravenous Doses of VIS649 in Patients with Immunoglobulin A (IgA) Nephropathy	Prof. Narayan Prasad, Nephrology	19.09.2020	22.03.2021	ICICI Lombard General Insurence Company Ltd.	VISTERRA, INC, USA
2	A Randomized Double-blind, Multicenter, Palcebo-controlled Phase 3 study with Open-label period to evaluate the efficacy and safty of Inebilizumab in Adults with Myasthebia Gravis	Prof. J. Kalita, Neurology	21.11.2020	09.04.2021	ICICI Lombard General Insurence Company Ltd.	Viela Bio, Inc.
3	A prospective, Multicentre, Non-Interventional, Real-world, Data Collection Registry to Evaluate the Effective, safety and Durability of SUPRA Stent for the Treatment of De Novo or Restenotic Superficial Femoral Artery or Complex Femoropopliteal Artery Lesions in Indian Patients	Dr.Raghu-nandan Prasad Radiodiagnosis	21.11.2020	16.07.21	National Insurance	Bioquest Solutions Pvt. Ltd.



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4	A Randomized Study of Chemotherapy (CT) followed by consolidation CRTT in Locally Advanced Gall Bladder Cancers (LA-GBC) (RACE-GB) Study)	Prof.Sushma Agarwal, Radiotehrapy	16.04.2019	16.07.2021	The oriental Insurance Company	Conquer Cancer The asco Fouandation, USA
5	A Randomized, Double -blind, Palcebo-controlled..... Myelomonocytic Leukemia-2	Dr.Anshul Gupta, Hematology	03.04.2021	30.10.2021	MAGMA HDI General Insurence Company Ltd.	Novartis Healthcare Pvt. Ltd.
6	Preventing Adverse Cardiac Events (PACE) in Chronic Obstructive Pulmonary Disease (COPD)	Dr.AlokNath, Pulmonary Medicine	25.09.2021	27.12.2021	Bajaj Allianz General Insurence Company Ltd.	Georange Institute for Global Health
7	A Randomized, Double-Blind, Placebo-controlledSystemic Juvenile Idiopathic Arthritis	Prof.Amita Aggarwal Clinical Immunology	21.12.2019	05.01.21	ICICI Lombard, General Insurance	Eli Lilly and Company India, Pvt. Ltd.
8	A post Marketing Surveillance (PMS).....SHIRE HUMAN GENETIC THERAPIES Inc.	Prof. Shubha R. Phadke Medical Genetics	29.06.2020	22.10.2021	MAGMA HDI General Insurence Company Ltd.	SHIRE HUMAN GENETIC THERAPIES



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CME/Workshops Programme List - 2021
List of Visiting Professor/Visiting Scientist/Departmental Guest (2021)

S. No.	Name	Department	Address	Duration	National/ International
1	Dr. Girisha K. M.	Medical Genetics	Professor and Head, Department of Medical Genetics, Kasturba Medical College, Manipal-576104	24 th March, 2021 and 30 th March, 2021	National
2	Dr. Ashwin Dalal	Medical Genetics	Head, Diagnostics Division, Centre for DNA Fingerprinting and Diagnostics, Hyderabad-500039	24 th March, 2021 and 30 th March, 2021	National


List of Intramural projects - 2021

Sl. No.	Title of the project	Name of PI & Department	Duration	Sanctioned amount
1	Intestinal Permeability and Bacterial Translocation in Spontaneous Bacterial Peritonitis in Children	Dr. Moinak Sen Sarma Pediatric Gastroenterology	01.08.2021 to 31.07.2023	5,00,000
2	Changes in metabolic effluents from coronary sinus as assessed by NMR: Comparison between St Thomas and Del Nido Cardioplegia solution along with their effect on Post CPB myocardial function	Dr. Amit Rastogi Anaesthesiology	01.08.2021 to 31.07.2023	2,80,000
3	Role of point of care ultrasound in early detection of Postoperative Pulmonary Complications after Peroral endoscopic myotomy (POEM) procedure	Dr. Rafat Shamim Anaesthesiology	01.08.2021 to 31.07.2023	80,000
4	To study the effect of medical nutrition therapy to alleviate school time hyperglycemia and address glycemic outcomes in children with type 1 diabetes mellitus	Dr. Siddhnath Sudhanshu Endocrinology	20.09.2021 to 19.09.2023	3,80,000
5	Seroprevalance and cross-reactivity of different neglected tropical diseases in blood culture negative febrile patients in a tertiary care center: A descriptive study	Dr. Sangram Singh Patel Microbiology	20.09.2021 to 19.09.2023	4,50,000



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6	An Assessment of the Accuracy of the Construct Placement during CV Junction Surgery using CT reconstructed Images Vs 3 D printed models: A Randomized Control Trial	Dr. Pawan Kumar Verma Neurosurgery	20.09.2021 to 19.09.2023	4,03,000
7	Antibody response following vaccination against COVID-19 using COVISHIELD in healthy HCW population	Dr. Alka Verma Emergency Medicine	20.09.2021 to 19.09.2023	5,00,000
8	Antibody response to COVID-19 vaccination in Patients with advanced liver disease	Dr. Amit Goel Gas- troenterology	20.09.2021 to 19.09.2023	5,00,000
9	Estimation of antibody response to SARS Corona virus-2 vaccination in patients of renal allograft recipients and maintenance hemodialysis	Dr. Dharmendra Singh Bhadauria Nephrology	20.09.2021 to 19.09.2023	5,00,000
10	Noise Levels and Surgical Team Distraction during Thyroidectomy in an Endocrine Surgery Operating Room	Dr. Sabaretnam May- ilvaganan Endo- crine Surgery	20.09.2021 to 19.09.2023	1,45,000
11	Inflammatory Response after Open and Laparoscopic Inguinal Hernia Repair in Children	Dr. Ankur Mandelia Super Spe- cialties	20.09.2021 to 19.09.2023	5,00,000
12	Microparticles in peripheral blood in trauma patients	Dr. Awale Rupali Bhalchandra Apex Trauma Center	01.12.2021 to 30.11.2023	4,97,240
13	Clinico-radiological and Immu- no-histopathological character- ization of eraniopharyngioma for risk stratification and develop- ment of a prognostic model	Dr. Ved Prakash Maurya Neurosurgery	01.12.2021 to 30.11.2023	4,47,000
14	Incidence and Prognostic Sig- nificance of Programmed Death Ligand-1 (PD-L1) Expression in Thyroid Carcinoma of Follicular Origin	Prof. Anjali Mishra Endocrine Surgery	01.12.2021 to 30.11.2023	5,00,000
15	Serum calprotectin as a diagnostic marker of intrahepatic cholestasis of pregnancy	Dr. Sangeeta Yadav Maternal & Reproductive Health	01.12.2021 to 30.11.2023	3,10,000
16	Study of Programmed Death Ligand-1 (PDL-1) Expres- sion and its Role as a Predic- tive Biomarker in Esophageal Carcinoma	Dr. Pallavi Prasad Pathology	01.12.2021 to 30.11.2023	3,30,000


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17	Utility of urinary mitochondrial DNA in predicting the immediate versus delayed graft function in live related renal allograft recipient	Dr. Ravi Shankar Kushwaha Nephrology	01.12.2021 to 30.11.2023	5,00,000
18	Generation of iPSC-derived HLA negative Hematopoietic Stem cells: A step towards treatment of Aplastic Anemia	Dr. Vinod Verma, SCRC Hematology	01.12.2021 to 30.11.2023	5,00,000
19	Effect of pneumatic transport system on coagulation indices of patients with sepsis. A comparative validation study in a multispecialty ICU of a tertiary care hospital	Dr. Rudrashish Hal-dar Anaesthesiology	01.12.2021 to 30.11.2023	1,01,800
20	Quality control of Fresh Frozen plasma using plasma sample taken from segment	Dr. Dheeraj Khetal Transfusion Medicine	01.12.2021 to 30.11.2023	3,40,000
			Total	77,64,040

List of Extramural projects - 2021

S. No.	Title of the project	Name of PI & Department	Funding agency	Sanctioned year	Duration	Sanctioned amount
1	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 Molecular Medicine & Biotechnology	DBT	2021	2021-2023	83,93,968
2	Whole-Exome Sequencing Genetic Testing and Functional Characterization of Rare Pathogenic Alleles Causing Neurodevelopmental Disorders for Biomarker Identification and Community Genetics Surveillance	Dr. Anshika Srivastava Medical Genetics	ICMR	2021	2021-2024	16,63,316



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3	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 parameters	Prof. U.C. Ghoshal Gastroenterology	UPCST	2021	2021-2023	8,30,000
4	Indian Undiagnosed Diseases Program (I-UDP)	Dr. Moirangthem Amita Medical Genetics	ICMR	2021	2021-2024	38,31,867
5	Study the toxic effects of exposure to Bisphenol A and Dibutylphthalates on renal organ and identification of potential therapeutics for its mitigation by using Drosophila melanogaster model organism	Dr. Naveen Kumar Gautam Urology & Renal Transplantation	DST-SERB	2021	2021-2024	52,59,640
6	Understanding the Epigenetic basis of Lympho-myeloid Switch: An escape Mechanism from CD19+CAR T-cell Therapy	Dr. Kulwant Singh SCRC, Hematology	ICMR	2021	2021-2024	24,65,216
7	HTA of National stroke care registry program development of Hospital-based registries (HBSR) in different regions of India	Prof. Jayantee Kalita Neurology	ICMR-NCDIR	2021	2021-2026	25,00,000
8	Metabolomic profile of ampullary carcinoma	Dr. Raghavendra L Pathology	ICMR	2021	2021-2024	21,31,816
9	To establish facility for micro-architectural and histo-morphometric assessment of bone in osteoporosis and metabolic bone disease (BMD)	Prof. Sushil K Gupta Endocrinology	DBT	2021	2021-2026	7,84,14,429



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10	Environmental Surveillance of severe acute respiratory syndrome Corona virus 2 in India	Prof. Ujjala Ghoshal Microbiology	ICMR	2021	2021-2023	20,57,135
11	Understanding the molecular basis of MEF2D-rearranged oncogenic fusion proteins in Leukemogenesis	Dr. Kulwant Singh SCRC, Dept. of Hematology	DST-SERB	2021	2021-2023	28,47,380
12	Genetic risk factors and biomarkers of Non-alcoholic fatty liver disease	Dr. Samir Mohindra Gastroenterology	ICMR	2021	2021-2024	16,98,777
					Total	11,20,93,544

List of Ph.D. students with enrolment number - 2021

S. No.	Enrolment Number	Name of Student	Date of Joining	Name of Guide & Department	Fellowship status UGC/CSIR/ICMR/DBT/ Institute
1	PGI/Ph.D./Gastro./01/2021	Ms. Sushmita Rai	10.02.2021	Prof. U.C. Ghoshal Gastroenterology	Project
2	PGI/Ph.D./Gastro./02/2021	Ms. Madhuri Singh	10.02.2021	Prof. U.C. Ghoshal Gastroenterology	CSIR
3	PGI/Ph.D./Nuclear Med./03/2021	Ms. Anjali Shrivastav	10.02.2021	Dr. Manish Dixit Nuclear Medicine	Project
4	PGI/Ph.D./MM&B/04/2021	Mr. Gajendra Singh	16.02.2021	Dr. Alok Kumar Molecular Medicine & Biotechnology	Project
5	PGI/Ph.D./Micro/05/2021	Ms. Jyoti	18.02.2021	Dr. Chinmoy Sahu Microbiology	DST-INSPIRE
6	PGI/Ph.D./Hemato./06/2021	Mr. Suraj Kumar Singh	09.02.2021	Dr. Vinod Verma SCRC, Dept. of Hematology	Project
7	PGI/Ph.D./Endo./07/2021	Ms. Pratima Gupta	12.07.2021	Dr. Rohit A Sinha Endocrinology	ICMR
8	PGI/Ph.D./Micro/08/2021	Ms. Nida Fatima	10.07.2021	Dr. Chinmoy Sahu Microbiology	Project
9	PGI/Ph.D./Hemato/09/2021	Mr. Sarthak Srivastava	08.07.2021	Dr. C.P. Chaturvedi SCRC, Hematology	ICMR

10	PGI/Ph.D./ U&RT/10/2021	Ms. Poornima Verma	16.07.2021	Dr. Naveen Kumar Gautam Urology & Renal Transplantation	CSIR-UGC
11	PGI/Ph.D. / Hemato/11/2021	Ms. Ghazala Sabereen	23.7.2021	Dr. Ruchi Gupta Hematology	CSIR-UGC

Activities/ Events of the Institute: 2021

- 25th Convocation of SGPGIMS held on 9th Jan. 2021 where degrees were awarded 194 students who successfully completed their DM/MCH/Ph.d/MD/PDCC and BSc nursing training.
- 1st Vaccination drive against Covid 19 was started on 16th Jan 2021.
- The Facility of Smart Card and Digital Kiosk System in Central Library for its users on 25th Jan 2021.
- Collage of Nursing, SGPGI celebrated its 13th Foundation Day and 11th Lamp Lighting Ceremony on 1st Feb 2021. 40 students of 11th batch of BSc Nursing took the ceremonial Florence nightingale pledge before joining nursing profession.
- The department of Hepatology was formally inaugurated on 16th Feb to provide dedicated specialty services for patients with liver disease.
- Liquid Oxygen Plant with the capacity of 20000 liters was inaugurated on 17th April in Rajdhani Covid Hospital (now APEX Trauma Centre).
- World Environment Day was celebrated on 5th June 2021 where tree plantation was done at various places in SGPGI. 101 saplings of Ashoka, Oliendar & TMC was planted on this day.
- Post Covid Clinic was started on 7th June in New OPD block. A dedicated phone no was also made functional for online consultation to cater to the queries of patients with post covid complications.
- International Yoga Day was celebrated on 21th June where 100 participants practised yoga under the guidance of Yogacharya Shri Krishna Pal.
- 26th Convocation day was celebrated with zeal on 27th August 2021 where degrees were awarded to 116 students in various specialties.
- For the first time in UP, Deptt. Of Nephrology with Deptt. Of Urology and Renal transplantation performed the swap renal transplant on 31st August 2021.
- E-Office was formally inaugurated on 1st September to make the working more efficient, effective and paperless.
- Geriatric Helpdesk was formally inaugurated on 3rd September 2021 to facilitate senior citizens visiting OPD in New OPD Block.
- A walkathon was organized under the aegis of SGPGI Breast Health Program as a part of walk to raise Breast cancer awareness on 31st October 2021.
- On the occasion of "World Diabetes Day" a walkathon was organized on 14th November to create awareness about the disease.
- On the occasion of International Day of persons with disability, a kiosk by divyang was started near PMSSY Block on 3rd December.
- 2nd Research Day of the institute was celebrated on 13th December 2021, where 240 papers were presented of which 100 were from the faculty of the institute.

18. Institute's 38th Foundation Day was celebrated on 14th December. Foundation day oration was delivered by Padmashree Prof. Ravi Kannan, Director of Cachar Cancer Hospital and Research Centre, Silchar, Assam.
19. A Med Tech Centre of entrepreneurship was formally inaugurated on 18th December to establish a centre of entrepreneurship in the field of Medical Electronics and Health Informatics.



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SCHOOL OF TELEMEDICINE

School of Telemedicine & Biomedical Informatics (STBMI)

1/01/2021-31/12/2021

Faculty Name: Prof. P K Pradhan (Nuclear medicine)

Nodal Officer, Telemedicine

Telemedicine Program Committee

Name	Department	Prog. Committee
Prof. R K Dhiman	Director SGPGIMS	Chairman
Prof. Aneesh Srivastava	Dean SGPGIMS	Member
Prof S K Mishra	Advisor, SGPGI Prog Comm.	Member
Prof.U C Ghoshal	FIR (Research)	Member
Prof N Krishnani	Pathology	Member
Prof Archana Gupta	Radio Diagnosis	Member
Prof R K Singh	Emergency Medicine	Member
Prof M S Ansari	Urology	Member
Prof Anjali Mishra	Endocrine Surgery	Member
Prof P K Pradhan	Nuclear Medicine	Member-Secretary

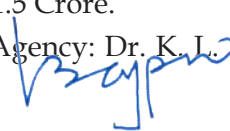
Honour and Award:

1. Vice President Elect ,Telemedicine Society of India – 2021
2. Organising Secretary, International and Annual conference of Telemedicine Society of India,14-16 th Nov.2021
3. Best oral scientific abstract presentation award for “National Medical College Network (NMCN) – An Enterprise Digital Infrastructure Network for management of elearning in Health Sciences during COVID 19” in Telemedicon 2021

Research Project Including Both:

Extramural Research Grants: Five (5)

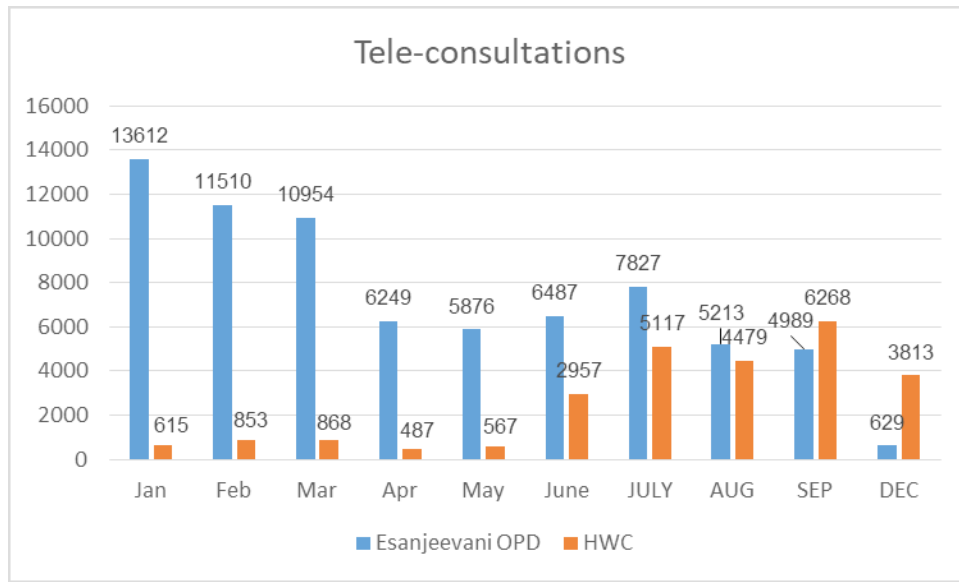
1. Grant-In-Aid support to undertake awareness activities and maintaining the existing infrastructure and activities at RRC), SGPGIMS, Lucknow under the National Medical College Network Project. PI: P K Pradhan. Funding Agency: MoHFW, Govt. of India. Grant Amount: Rs.2,65,69,235.68.
2. Establishment of Telemedicine Facility in the Hospitals of National Thermal Power Corporation (NTPC), North Region (NRHQ). PI: P K Pradhan. Funding Agency: NTPC, NRHQ, Lucknow, U.P. Grant Amount: Rs.16,20,000.00.
3. Operation of Smart Health ATM Center in the City of Lucknow. PI: P K Pradhan. Funding Agency: Lucknow Smart City Limited (LSCL), Govt. of U. P. Grant Amount: 1.5 Crore.
4. Mobile Tele-oncology and Primary Care Project. PI: P K Pradhan. Funding Agency: Dr. K. J. Garg Memorial Charitable Trust, Lucknow. Grant Amount: Rs.14.00 Lakh.


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- 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: Rs. 44,76,000.00.

Services

- SGPGI under Ayushman Bharat-Health & Wellness Center (AB-HWC) funded by State NHM, Govt. of Uttar Pradesh. Total 1,09,545 Teleconsultation given under AB-HWC



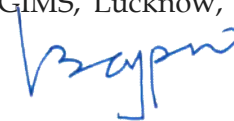
- Designed, Managed and assisted Electronic Covid Care System (eCCS) for the state of Uttar Pradesh & OPD Clinic of 26 specialty departments for patient care. : 55,000 Patients Benefitted
- Telemedicine Technical Assistance in 150 Sessions of COVID-19 Training of Health Care Workers (HCWs) NHM Staff & Virtual ICU Rounds Cloud hosted ECHO-ZOOM by SGPGIMS, Lucknow
- 25 Online 01 & 02 Credit - Soft Skill Based Courses: 400 theme based session conducted in 25 online soft skill courses. Lectures transmitted live to the participants and were recorded, edited and uploaded in NMCN website.
- Number of Tele-Consultations and Lectures over Tele-Education Service in NMCN Portal for accessing offline by medical students & Researchers: eLearning Lectures. 2095 Medical Lectures created, edited and uploaded in NMCN portal
- Total 432 Sessions conducted for College of Medical Technology (CMT) / College of Nursing in the year 2021. Cloud hosted Solutions using Zoom, Webex, GotoMeeting sessions used.

Publications

Conference Presentations:

National:

- Prof. P K Pradhan delivered an invited lecture in Telemedicon 2021, SGPGIMS, Lucknow, nov.14-16th 2021.



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Workshop/Conferences Organized:

1. Organized 17th International conference of telemedicine Society of India on 14-16th Nov.2021, SGPGIMS, Lucknow as Organizing Secretary.
2. 01 Course on Telemedicine Basics (Part I) is conducted by STBMI, NRC- NMCN, SGPGI, Lucknow 18-23 October, 2021.

Outstanding Features/Summary:

1. Covid related highlights (if any) would be welcome: Designed, Managed and assisted Electronic Covid Care System (eCCS) for the state of Uttar Pradesh & OPD Clinic of 26 specialty departments for patient care. : 55,000 Patients Benefitted
2. Telemedicine Technical Assistance in 150 Sessions of COVID-19 Training of Health Care Workers (HCWs) NHM Staff & Virtual ICU Rounds Cloud hosted ECHO-ZOOM by SGPGIMS, Lucknow
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Future Plans

1. **Patient Care:** Its envisaged that patient care will improve significantly with sustainable and disruptive telehealth care in isolation and in combination with in person care as practiced traditionally. This will bring improvement in continuum of care to the ailing population in rural community.
2. **Education:** Sharing of CME, Workshop, lectures with Medical colleges under National Medical College Network & Uttar Pradesh Medical Colleges.
3. **Research :** Our goal is to utilize various analytical tools and artificial intelligence for further improvement of simple primary care to complex tertiary care as per disease management model.



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