



छत्रपति शाहू जी महाराज विश्वविद्यालय, कानपुर



CSJMU Research Bulletin

छत्रपति शाहू जी महाराज विश्वविद्यालय, कानपुर

शोध पत्रिका

ॐ असतो मा सद्गमय । तमसो मा ज्योतिर्गमय । मृत्योर्मा अमृतं गमय । ॐ शान्तिः शान्तिः शान्तिः ॥

(Jan-Feb 2025)



Designed by : TANISHA WADHAWAN (Asst. Prof.) Fine Arts Department , CSJMU



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Website: <https://csjmu.ac.in/csjmu-research/>

E-MAIL: research@csjmu.ac.in (Colleges) E-MAIL: campus.research@csjmu.ac.in (Campus)



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PROF. VINAY KUMAR PATHAK

Vice Chancellor
CSJM University, Kanpur



It is with immense pride and joy that I extend my heartfelt congratulations to the Research & Development (R&D) Cell and the Campus Research Promotion Cell (CRPC) of Chhatrapati Shahu Ji Maharaj University, Kanpur, on the successful launch of the first edition of the R&D Newsletter. This newsletter marks a significant milestone in our journey towards fostering a culture of innovation, research excellence, and industry collaboration. It serves as a testament to the remarkable efforts of our faculty, researchers, and students who are committed to pushing the boundaries of knowledge and contributing to societal progress. I commend the R&D and CRPC teams for their dedication in compiling and presenting impactful research, industry partnerships, and academic advancements. This initiative will not only highlight our university's research achievements but also inspire young minds to engage in pioneering work.

This initiative marks a significant step in our university's journey toward fostering a dynamic research culture. By documenting and sharing our research accomplishments, innovations, and collaborations, this newsletter will play a crucial role in connecting scholars, industry experts, and students. It will serve as a window into the groundbreaking work happening at CSJMU and inspire further academic and industrial partnerships. Research and development are the pillars of any progressive academic institution, and I commend the dedication, hard work, and vision of the R&D and CRPC teams in bringing this publication to life. Their commitment to promoting a research-driven ecosystem within the university is truly commendable.

The inclusion of the College Research Corner in this newsletter is particularly noteworthy, as it provides a platform for faculty members and students from affiliated colleges to showcase their research, innovations, and academic contributions. I strongly encourage all colleges to actively participate in this endeavor by engaging in quality research, publishing impactful work, and leveraging this platform to share their findings. Research and innovation are key drivers of academic and societal progress, and I am confident that this initiative will inspire colleges to contribute meaningfully to the research ecosystem.

I am confident that this newsletter will not only highlight the achievements of our researchers but also encourage more faculty and students to actively engage in meaningful research. I look forward to witnessing many more such initiatives that reinforce CSJMU's position as a hub of academic and research excellence.

My best wishes to the entire team, and I encourage all members of the CSJMU community to contribute and take inspiration from this valuable initiative.



DR. SUDHIR KUMAR AWASTHI

Pro-Vice Chancellor
CSJM University, Kanpur



I am pleased to congratulate the Research & Development (R&D) Cell and the Campus Research Promotion Cell (CRPC) on the launch of the first edition of the R&D Newsletter at Chhatrapati Shahu Ji Maharaj University, Kanpur.

This initiative is an important step in strengthening the research ecosystem across both the university campus and affiliated colleges. This newsletter is a wonderful initiative that brings together the research achievements, innovations, and industry collaborations of our university. It will serve as a valuable platform to showcase ongoing projects, highlight success stories, and encourage knowledge-sharing among students, faculty, and industry partners. The inclusion of research from affiliated colleges is particularly commendable, as it will encourage greater participation in scholarly activities, interdisciplinary collaborations, and the pursuit of impactful research. This initiative not only showcases ongoing academic endeavors but also motivates institutions under CSJMU to foster innovation and excellence in research.

I deeply appreciate the efforts of the R&D and CRPC teams in making this initiative a reality. Their commitment to advancing research at both the campus and college levels is truly inspiring. I encourage all faculty members, researchers, and students from our campus and affiliated colleges to take full advantage of this platform, contribute to the growth of research, and explore opportunities for global collaborations.

Wishing the entire team great success in this initiative!



DR. ANIL KUMAR YADAV
Registrar
CSJM University, Kanpur



I am delighted to congratulate the Research & Development (R&D) Cell and the Campus Research Promotion Cell (CRPC) on the successful release of the first edition of the R&D Newsletter at Chhatrapati Shahu Ji Maharaj University, Kanpur.

This initiative is a remarkable step toward fostering a dynamic research culture not only within the university campus but also across our affiliated colleges. By providing a platform to showcase research activities, innovations, and collaborations, this newsletter will serve as a bridge connecting scholars, industry experts, and students from both the campus and colleges.

The inclusion of research contributions from affiliated institutions will further encourage faculty members and students to engage in meaningful academic exploration, publish impactful work, and drive innovation. Research is the cornerstone of academic excellence, and I believe this initiative will strengthen the research ecosystem across all institutions associated with CSJMU.

I commend the R&D and CRPC teams for their dedication in bringing this initiative to life. Their efforts will undoubtedly inspire more colleges and departments to actively participate in research, fostering a culture of curiosity and knowledge-sharing.

My best wishes to the entire team, and I encourage everyone—from campus departments to affiliated colleges—to contribute and make the most of this platform.



DR. RAKESH KUMAR DWIVEDI

Director, College Development Council
CSJM University, Kanpur



It gives me immense pleasure to congratulate the Research & Development (R&D) Cell and the Campus Research Promotion Cell (CRPC) on the successful launch of the first edition of the R&D Newsletter at Chhatrapati Shahu Ji Maharaj University, Kanpur.

This initiative is a significant step towards creating a strong research ecosystem that connects both the university campus and affiliated colleges. The inclusion of research activities from various colleges and the university campus will serve as a motivation for scholars to engage in meaningful and high-impact research. By fostering an environment of innovation, collaboration, and knowledge-sharing, this newsletter will play a crucial role in enhancing research output across all institutions associated with CSJMU.

I encourage faculty members, researchers, and students from both the campus and affiliated colleges to take advantage of this platform to share their findings, explore new ideas, and contribute to the advancement of knowledge. Research and innovation are key to academic growth, and this initiative will undoubtedly inspire greater participation in research-driven activities.

Once again, I extend my best wishes to the R&D and CRPC teams for their commitment to promoting a culture of research excellence. I look forward to seeing remarkable contributions from both our campus and affiliated colleges in future editions of this newsletter.



PROF. BRISHTI MITRA
Dean Academics
CSJM University, Kanpur



I would like to extend my heartfelt congratulations to the Research & Development (R&D) Cell and the Campus Research Promotion Cell (CRPC) on the successful release of the first edition of the R&D Newsletter at Chhatrapati Shahu Ji Maharaj University, Kanpur.

This significant initiative will undoubtedly play a crucial role in promoting academic excellence and fostering research and innovation within the university. I commend the efforts of all those involved in making this newsletter a reality and look forward to seeing the continued growth of this valuable platform.

Congratulations once again to the entire team!



DR. SUDHANSHU PANDYA
Dean Administration
CSJM University, Kanpur



I would like to extend my sincere congratulations to the Research & Development (R&D) Cell and the Campus Research Promotion Cell (CRPC) on the successful release of the first edition of the R&D Newsletter at Chhatrapati Shahu Ji Maharaj University, Kanpur.

This initiative is a remarkable milestone in our university's ongoing efforts to promote research, development, and academic excellence. The newsletter provides a platform to showcase our achievements, highlight innovative projects, and connect with broader academic and industry networks.

I commend the efforts of the R&D and CRPC teams in making this project a success. This publication will undoubtedly support the continuous growth of research activities across the campus and affiliated colleges. It reflects our commitment to fostering an environment where research and innovation thrive.

Congratulations once again to everyone involved, and I look forward to seeing this platform evolve and further contribute to the university's academic progress.



DR. ANURADHA KALANI

Dean, Projects and Consultancy
CSJM University, Kanpur



I would like to extend my warm congratulations to the Research & Development (R&D) Cell and the Campus Research Promotion Cell (CRPC) on the successful release of the first edition of the R&D Newsletter at Chhatrapati Shahu Ji Maharaj University, Kanpur.

This initiative is an excellent step toward strengthening our university's commitment to research, innovation, and industry collaboration. The newsletter will serve as a valuable platform for sharing our achievements, fostering new partnerships, and promoting interdisciplinary research projects.

I commend the efforts of the teams involved in bringing this project to fruition. This newsletter will undoubtedly enhance the visibility of our research and consultancy activities, and I look forward to seeing its continued success in the future.

Congratulations to everyone involved!



DR SHILPA D KAISHTA
Dean, Innovation
CSJM University, Kanpur



I would like to congratulate the Research & Development (R&D) Cell and the Campus Research Promotion Cell (CRPC) on the successful release of the first edition of the R&D Newsletter at Chhatrapati Shahu Ji Maharaj University, Kanpur. This initiative is an excellent step towards promoting a culture of innovation, research, and academic collaboration within our university. The newsletter will serve as a valuable platform for showcasing our innovative projects, breakthroughs, and industry collaborations. It is also an opportunity to explore ways in which we can develop more ideas, generate patents, and support innovative concepts from our talented faculty and students.

I truly applaud the efforts of everyone involved in creating this newsletter, which will undoubtedly inspire further engagement in innovation and provide a strong foundation for future success in research and development. I look forward to seeing how this platform can evolve, offering more opportunities for fostering creativity and bringing ideas to life. Congratulations once again to the entire team!



DR. NAMITA TIWARI

Dean, Research & Development
CSJM University, Kanpur



It is with immense pride and excitement that I congratulate the Research & Development (R&D) Cell and the Campus Research Promotion Cell (CRPC) on the successful release of the first edition of the R&D Newsletter at Chhatrapati Shahu Ji Maharaj University, Kanpur. This newsletter is a significant milestone in our ongoing journey to foster a culture of research, innovation, and collaboration across the university and its affiliated colleges. It provides a powerful platform to not only showcase the groundbreaking research and innovative ideas being developed across both the campus and affiliated colleges, but also to celebrate the efforts and accomplishments of our faculty, researchers, and students.

By sharing knowledge, research breakthroughs, and collaboration opportunities, this newsletter will play a crucial role in building connections among the university, industry partners, and the global academic community. I believe it will inspire our researchers to push the boundaries of innovation and explore new areas of inquiry that have the potential to create meaningful impact.

The R&D Newsletter serves as a tangible reflection of our commitment to enhancing the quality of research, developing patents, and supporting innovative ideas that contribute not only to academia but also to societal progress. It is my strong belief that through continuous engagement with both national and international research platforms, we will further elevate the stature of our university and affiliated colleges in the global research ecosystem.

I applaud the tireless efforts of the R&D and CRPC teams for their leadership and commitment in bringing this initiative to life. Their work exemplifies the spirit of collaboration and innovation that we value at CSJMU. Let us continue to build on this momentum, fostering an environment where research excellence thrives, and where our innovative ideas have the power to transform industries and communities worldwide.

Once again, congratulations to everyone involved. Let's look forward to future editions of this newsletter, which I am sure will continue to inspire and showcase the immense potential within our academic community!



DR. RAKESH SHARMA

Associate Dean, Campus Research Promotion Cell (CRPC)
CSJM University, Kanpur



It gives me great pleasure to congratulate the Research & Development (R&D) Cell and the Campus Research Promotion Cell (CRPC) on the successful release of the first edition of the R&D Newsletter at Chhatrapati Shahu Ji Maharaj University, Kanpur.

This newsletter is a significant achievement, showcasing the remarkable research and development work being undertaken across both the university campus and our affiliated colleges. It is a powerful platform for highlighting our academic excellence, innovative projects, and the ongoing collaborations with industry and academic partners.

I would like to particularly acknowledge the tremendous efforts of the R&D and CRPC teams for their hard work, vision, and dedication in bringing this publication to life. Their combined efforts are crucial in creating a vibrant research culture and building stronger ties with industry that benefit both our students and faculty.

The launch of this newsletter not only enhances our research visibility but also opens up numerous opportunities for career development, internships, and placement collaborations. It is a testament to our university's commitment to fostering a dynamic ecosystem of learning, innovation, and professional growth.

I encourage everyone across the campus and affiliated colleges to engage with this newsletter, share their innovative ideas, and seize the opportunities it presents for personal and professional development. Once again, congratulations to the R&D and CRPC teams for this remarkable achievement.

Let us continue working together to strengthen our research initiatives, support innovation, and contribute to shaping a bright future for academia and industry alike!



Paper Published & Indexed in Scopus(Jan-Feb)

S.No	Title	Journal	Quartile/ Impact factor	Auhors and Affiliation	Document type	DOI
1.	Sustainable lipid production by oleaginous yeasts: Current outlook and challenges	Biore-source Technology	Q1/9.7	Kumar K.K., Deeba F., Yeast Biofuel Group, International Centre for Genetic Engineering and Biotechnology, New Delhi, 1100067, India; Pandey A.K., School of Life Sciences and Biotechnology, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, 208024, India ; Islam A., Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi, 110025, India; Paul D., Amity Institute of Biotechnology, AUUP, sec-125, Noida, 201313, India; Gaur N.A., Yeast Biofuel Group, International Centre for Genetic Engineering and Biotechnology, New Delhi, 1100067, India	Review	10.1016/j.bior tech.2025.132205
2.	Versatile applications of cobalt and copper complexes of biopolymeric Schiff base ligands derived from chitosan.	International Journal of Biological Macromolecules	Q1/7.7	Malav R., Ray S., Catalytic Applications Laboratory, Department of Chemistry, School of Basic Sciences, Faculty of Science, Manipal University Jaipur, Rajasthan, Jaipur, 303007, India; Sharma R.K., Department of Life Sciences, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, 208024, India	Article	10.1016/j.ijbio mac.2025.140338
3.	Harnessing electrospun nanofibers for comprehensive oral disease management: Current trends and future perspectives	Journal of Drug Delivery Science and Technology	Q1/4.5	Gupta R., School of Pharmaceutical Sciences, CSJM University, Uttar Pradesh, Kanpur, 208024, India; Pandey G., Pharmaceutical Innovation and Translational Research Lab (PITRL), Department of Pharmaceutics, National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, 500037, India; Kumar A., Kapoor A., School of Pharmaceutical Sciences, CSJM University, Uttar Pradesh, Kanpur, 208024, India ; Wagh S., Pharmaceutical Innovation and Translational Research Lab (PITRL), Department of Pharmaceutics, National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, 500037, India ; Kolipaka T., Pharmaceutical Innovation and Translational Research Lab (PITRL), Department of Pharmaceutics National Institute of Pharmaceutical	Review	10.1016/j.jddst.2025.106681

				Education and Research (NIPER), Hyderabad, 500037, India; Famta P., Pharmaceutical Innovation and Translational Research Lab (PITRL), Department of Pharmaceutics, National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, 500037, India; Mishra A., School of Pharmaceutical Sciences, CSJM University, Uttar Pradesh, Kanpur, 208024, India; Srivastava S., Pharmaceutical Innovation and Translational Research Lab (PITRL), Department of Pharmaceutics, National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, 500037, India; Mishra S.K., School of Pharmaceutical Sciences, CSJM University, Uttar Pradesh, Kanpur, 208024, India.		
4.	MPPD modeling based differential lung dosimetry of rifabutin loaded β -glucan dry powder microparticles in adult mice and various human age groups	Journal of Drug Delivery Science and	Q1/4.5	Anshita, Inhalation Toxicology Facility, REACT Division, CSIR- Indian Institute of Toxicology Research, Vishvigyan Bhawan, 31, Mahatma Gandhi Marg, P.B. No. 80, UP, Lucknow, 226001, India, Academy of Scientific and Innovative Research (ACSIR), UP, Ghaziabad, 201002, India; Kumar V., Inhalation Toxicology Facility, REACT Division, CSIR- Indian Institute of Toxicology Research, Vishvigyan Bhawan, 31, Mahatma Gandhi Marg, P.B. No. 80, UP, Lucknow, 226001, India; Ahmad F., Department of Physiological Sciences, Oklahoma Centre for Respiratory and Infectious Diseases, Oklahoma State University, 74078, OK, United States; Khubaib M., Department of Biosciences, Integral University, UP, Lucknow, 226026, India; Sharma R., Department of Life Sciences & Biotechnology, Chhatrapati Shahu Ji Maharaj University, UP, Kanpur, India; Singh J., Inhalation Toxicology Facility, REACT Division, CSIR- Indian Institute of Toxicology Research, Vishvigyan Bhawan, 31, Mahatma Gandhi Marg, P.B. No. 80, UP, Lucknow, 226001, India, Academy of Scientific and Innovative Research (ACSIR), UP, Ghaziabad, 201002, India	Article	10.1016 / j . - jddst.2025.106686
5.	Materiality of antimony doping in Ge-S amorphous chalcogenides in nonlinear switching	European Physical Journal Plus	Q1/2.8	Kumar, A., Department of Physics, Indian Institute of Information Technology Bhopal, Bhopal, 462003, India; Shukla, S., Department of Physics, School of Basic Sciences, U.I.E.T., C.S.J.M. University, Kanpur,	Letter	10.1140/ep-jp/s13360-025-06088-4

				208024, India; Kumar, S., Department of Physics, Christ Church College, Kanpur, 208001, India; Gupta, R., Materials Science Programme, Indian Institute of Technology, Kanpur, 208016, India		
6.	Exploring the application of herbal photosensitizers in anti-microbial photodynamic therapy against Mycobacterium Tuberculosis	3 Biotech	Q1/2.6	Virdi, V., Singh, J., Sharma, R., Verma, D.K., Department of Life Sciences and Biotechnology, Chhatrapati Shahu Ji Maharaj University Kanpur, Uttar Pradesh, Kanpur, India	Review	10.1007/s13205-024-04205-1
7.	Baseline susceptibility and biochemical mechanism of field-evolved resistance in brown planthopper, Nilaparvata lugens (Stål) to flupyrimin in India	Crop Protection	Q1/2.5	Roy D., Biswas S., Dhaanya Ganga Krishi Vigyan Kendra, Ramakrishna Mission Vivekananda Educational and Research Institute, West Bengal, Murshidabad, 742408, India; Paul K., Jalpaiguri Krishi Vigyan Kendra, West Bengal University of Animal and Fishery Sciences, West Bengal, Jalpaiguri, 735219, India; Biswas A., Department of Agricultural and Environmental Sciences – Production, Landscape, Agroenergy, University of Milan, Via Celoria 2, Milan, 20133, Italy; Ghosh A., Department of Agricultural Meteorology, Odisha University of Agriculture and Technology, Odisha, Bhubaneswar, 751003, India; Biswas M., Department of Biological Sciences, Indian Institute of Science Education and Research Kolkata, Nadia, West Bengal, 741246, India; Banerjee S., Department of Agriculture, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, 208012, India; Chakraborty G., Department of Agricultural Entomology, Bidhan Chandra Krishi Viswavidyalaya, Nadia, West Bengal, Mohanpur, 741252, India	Article	10.1016/j.cropro.2025.107161
8.	Bio-inspired gloden jackal optimization of XGBoost model enhances 30-day sepsis mortality predictions	Journal of Critical Care	Q1/1.5	Kumar H., Department of Information Technology, Chhatrapati Shahu Ji Maharaj University, Kanpur, India; Agarwal R., Department of Computer Science and Engineering, Harcourt Butler Technical University, Kanpur, India; Yadav A., Department of Computer Application, PSIT College of Higher Education, Kanpur, India	Letter	10.1016/j.jcrrc.2024.155013

9.	Correspondence: Re: Satpute et al	Journal of Physiotherapy	Q1/9.7	Rafat S., Department of Physiotherapy, School of Health Sciences, Chhatrapati Shahu Ji Maharaj University, Kanpur, India; Srivastav A.K., Department of Physiotherapy, School of Health Sciences, Chhatrapati Shahu Ji Maharaj University, Kanpur, India; Sharma D., Department of Physiotherapy, School of Health Sciences, Chhatrapati Shahu Ji Maharaj University, Kanpur, India	Letter	10.1016/j.j-phys.2024.11.002
10.	A Review on Scattering Techniques for Analysis of Nanomaterials and Biomaterials	Engineered Science	Q1	Prasad R.D., Bihar Veterinary College, Samanpura, Khajpura, Bihar State, Patna, 800014, India, Koshi College, Bihar State, Khagaria, 851205, India; Prasad N.R., Shivaji University, Maharashtra State, Kolhapur, 416004, India; Prasad N., Department of Education, CSJM University, Uttar Pradesh, Kanpur, 208024, India; Prasad S.R., Electronics and Telecommunication Department, DKTE College of Engineering, Maharashtra State, Ichalkaranji, 416115, India; Prasad R.S., Banaras Hindu University, Uttar Pradesh, Varanasi, 221005, India; Prasad R.B., Birsa Agricultural University, Kanke, Jharkhand, Ranchi, 834006, India; Prasad R.R., Department of Civil Engineering, Muzaffarpur Institute of Technology, Bihar State, Muzaffarpur, 842003, India; Prasad R.G., Department of Physics, Rajendra College, District Saran, Bihar State, Chapra, 841301, India; Desai C.B., Karnataka, Yadgud, 591309, India; Vaidya A.K., Vaidya Nandedkar Ayurvedic Clinic, Maharashtra, Kolhapur, 416001, India; Shaikh Y.I., Nazeruddin G.M.,; Shaikh V., Department of Chemistry, Abeda Inamdar College, Maharashtra State, Pune, 411001, India; Pande R.S., Nagpur Veterinary College, Maharashtra, Nagpur, 440006, India; Mamidpelliwar P.M., Deshmukh R.N., Nagpur Veterinary College, Maharashtra, Nagpur, 440006, India; Patil V.N., Department of Materia, J J Magdum Homeopathic College, Jaysingpur, 416101, India; Samant A., Department of Samhita, Siddhant J J Magdum Ayurvedic College, Jaysingpur, 416101, India; Chiplunkar C., Kripalu Dham, Mangarh, Uttar Pradesh, Kunda, 230204, India; Guo Z., Faculty of Engineering and Environment, Northumbria	Review	10.30919/es1332

				University, Newcastle Upon Tyne, NE1 8ST, United Kingdom; Sarvalkar P., Shaikh A.D, Shivaji University, Maharashtra State, Kolhapur, 416004, India; Ramteke A.A., Department of Chemistry, Devchand College, Arjun Nagar, Nipani, 591237, India		
11.	Healing wounds in diabetes: Exploring cutting-edge natural extracellular vesicle therapeutics	Obesity Medicine	Q1	Miya, M.B., Disease Biology Lab, School of Life Sciences and Biotechnology, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, 208024, India; Chaturvedi, P., Department of Physiology, University of Louisville, Louisville, KY 40202, United States; Pathak, V., Disease Biology Lab, School of Life Sciences and Biotechnology, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, 208024, India; Gupta, P.C., School of Pharmaceutical Sciences, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, 208024, India; Kalani, A., Disease Biology Lab, School of Life Sciences and Biotechnology, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, 208024, India, Department of Physiology, University of Louisville, Louisville, KY 40202, United States	Review	10.1016/j.obmed.2025.100597
12.	Engineering novel nanomaterials for energy storage: NiO/CuO/ α -Fe ₂ O ₃ nanocomposites synthesized via hydrothermal method	Inorganic Chemistry Communications	Q1	Upadhyay L., Department of Physics, Annamalai University, Annamalai Nagar, Tamil Nadu, Chidambaram, 608002, India; Dhanapandian S., Department of Physics, Annamalai University, Annamalai Nagar, Tamil Nadu, Chidambaram, 608002, India; Suthakaran S., Department of Physics, Karpagam Institute of Technology, Tamil Nadu, Coimbatore, 641105, India; Yadav B., Department of Materials Science & Metallurgical Engineering, School of Engineering & Technology, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, 208024, India; Kar K.K., Materials Science Programme, Indian Institute of Technology Kanpur, Uttar Pradesh, Kanpur, 208016, India, Advanced Nano Engineering Materials Laboratory, Department of Mechanical Engineering, Indian Institute of Technology Kanpur, Kanpur, 208016, India; Kumar D., Department of Ceramic Engineering, Indian Institute of Technology, (Banaras Hindu University),	Article	10.1016/j.inoche.2024.113871

				Uttar Pradesh, Varanasi, 221005, India; Sundaramurthy S., Department of Chemical Engineering, Maulana Azad National Institute of Technology, Madhya Pradesh, Bhopal, 426 003, India		
13.	Polymeric Nanoparticles Revolutionizing Brain Cancer Therapy: A Comprehensive Review of Strategies and Advances	Critical reviews in therapeutic drug carrier systems	Q2/3	Wahengbam G.S., Nirmal S., Nandwana J; Kar S., Kumari V., Cancer Research Laboratory, Department of Biosciences, Manipal University Jaipur, India; Mishra R., Department of Life Sciences and Biotechnology, Chhatrapati Shahu Ji Maharaj University, Kanpur, India; Singh A., Manipal University Jaipur	Review	10.1615/CritRevTherDrugCarrier-Syst.2024051822
14.	Enhancement of supercapacitor efficiency by Fe ³⁺ doping in hydrothermally synthesized NiO nanoparticles	Physica B: Condensed Matter	Q2/2.8	Upadhyay L., Department of Physics, Annamalai University, Annamalai Nagar, Tamil Nadu, Chidambaram, 608002, India; Dhanapandian S., Department of Physics, Annamalai University, Annamalai Nagar, Tamil Nadu, Chidambaram, 608002, India; Suthakaran S., Department of Physics, Karpagam Institute of Technology, Tamil Nadu, Coimbatore, 641105, India; Yadav B., Department of Materials Science & Metallurgical Engineering, School of Engineering & Technology, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, 208026, India; Kar K.K., Materials Science Programme, Indian Institute of Technology, Uttar Pradesh, Kanpur, 208016, India, Advanced Nanoengineering Materials Laboratory, Department of Mechanical Engineering, Indian Institute of Technology Kanpur, Kanpur, 208016, India; Kumar D., Department of Ceramic Engineering, Indian Institute of Technology, (Banaras Hindu University), Uttar Pradesh, Varanasi, 221005, India	Article	10.1016/j.physb.2024.416608
15.	Innovations in Biomass-Derived Materials for Efficient CO ₂ Sequestration	Chemistry Africa	Q2/2.3	Verma S.K., Faculty of Biotechnology, Institute of Biosciences and Technology, Shri Ramswaroop Memorial University, Lucknow Deva Road, Uttar Pradesh, Barabanki, 225003, India; Singh D., Faculty of Biotechnology, Institute of Biosciences and Technology, Shri Ramswaroop Memorial University, Lucknow Deva Road, Uttar Pradesh, Barabanki, 225003, India;	Review	10.1007/s42250-024-01179-8

				Sharan A., Department of Biochemistry and Biochemical Engineering, Sam Higginbottom University of Agriculture, Technology and Sciences, Uttar Pradesh, Prayagraj, 211007, India; Khare R., Faculty of Biosciences, Institute of Biosciences and Technology, Shri Ramswaroop Memorial University, Lucknow Deva Road, Uttar Pradesh, Barabanki, 225003, India; Rai S., School of Pharmaceutical Sciences, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, 208024, India; Kumar P., Department of Bioinformatics, Kalinga University, Chhattisgarh, Raipur, 49210, India; Singh V., IMCE Department, Shri Ramswaroop Memorial University, Lucknow Deva Road, Uttar Pradesh, Barabanki, 225003, India		
16.	A Unique Ceruloplasmin Shows Distinct Redox Potentials for the Catalytic and Electron-Transfer Metal Sites	Peptide Science	Q2/1.9	Yadav P.K., Department of Life Sciences and Biotechnology, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, India; Barman S., Department of Biological Sciences, Indian Institute of Science Education and Research Kolkata, West Bengal, Mohanpur, India; Rajbongshi J., Department of Chemistry, Bhattadev University, Assam, Pathsala, India; Mishra R., Department of Life Sciences and Biotechnology, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, India; Mhaske S., Mazumdar S., Department of Chemical Sciences, Tata Institute of Fundamental Research, Mumbai, India; Sudhamalla B., Department of Biological Sciences, Indian Institute of Science Education and Research Kolkata, West Bengal, Mohanpur, India	Article	10.5355/5 - jab.v11i1.054
17.	Changes in Physical Activity Levels and Their Effects on Mid-life Well-being	International Journal of Preventive Medicine	Q2/1.7	Verma, K., Sharma, D., Nagpal, G., Bajpai, A., Department of Physiotherapy, School of Health Sciences, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, India	Letter	10.4103/i - jpv.m.ijpvm_234_24

18.	Libs-a promising technique for control of food quality	Journal of Optics (India)	Q3/1.6	Rai, D., Department of Food Technology, CSJM University, Uttar Pradesh, Kanpur, India; Rai, A.K., Department of Earth and Planetary Sciences, University of Allahabad, Uttar Pradesh, Prayagraj, India; Rai, A.K., Department of Physics, University of Allahabad, Uttar Pradesh, Prayagraj, India; Singh, D.B., Department of Biotechnology, Siddharth University, Uttar Pradesh, Kapilvastu, India; Yadav, A.K., Department of Food Technology, Rajiv Gandhi University, Arunachal Pradesh, Itanagar, India	Article	10.1007/s12596-024-02436-2
19.	Identity based proxy blind signature scheme using NTRU lattices	Information and Computation	Q3/0.8	Singh, S., Department of Mathematics, C.M.P. Degree College, Prayagraj, India; Rawal, S., Department of Mathematics, Motilal Nehru National Institute of Technology Allahabad, Prayagraj, India; Padhye, S., Department of Mathematics, Motilal Nehru National Institute of Technology Allahabad, Prayagraj, India; Tiwari, N., Department of Mathematics, Chhatrapati Shahu Ji Maharaj University, Kanpur, India	Article	10.1016/j.ic.2025.105284
20.	Blockchain Security Attacks, Difficulty, and Prevention	Recent Advances in Electrical and Electronic Engineering	Q3/0.6	Jyoti A., ABES Engineering College, Uttar Pradesh, Ghaziabad, India; Yadav V., Government Polytechnic Bighapur Unnao, Department of Technical Education, Uttar Pradesh, India; Rahul M., Department of Computer Application, School of Engineering and Technology, CSJM University, Kanpur, India	Review	10.2174/0123520965252489231002071659
21.	Cultural Diversity and Social Integration in Global Cities	Journal of Applied Bioanalysis	Q3	Bansal T., University School of Education, Guru Gobind Singh Indraprastha University, Delhi, India; Bordoloi D., Assam Women's University, Assam, Jorhat, India; Gupta P.K., Department of Economics, Chhatrapati Shahu Ji Maharaj University, Kanpur, India; Panda U.K., Hidayatullah National Law University, Raipur, India; Das P.K., Kamrup College, Assam, Nagaon, 782426, India	Article	10.53555/-jab.v11i1.057
22.	Analyzing Protein-Ligand Interactions in Complex Biological Systems: Applications of SPR and MS in Pharmaceutical and Medical Research	Journal of Applied Bioanalysis	Q3	Belagalla N., Department of Entomology, School of Agriculture, SR University, Telangana, Warangal, 506371, India; Philip J., Department of Microbiology, Patna Women's College Autonomous Patna University, India; Jadhav S.A., Dr. Shivajirao Kadam College of Pharmacy, Kasabe Digraj, Maharashtra, Sangli, India; Mangal M., Department of Chemistry, Poddar International	Article	10.53555/-jab.v11i1.054

				College, Mansarovar, Rajasthan, Jaipur, 302020, India; Samajdar D., Department of Pharmaceutical Chemistry, BCDA College of Pharmacy & Technology, Hridaypur, West Bengal, Kolkata, 700127, India; Katiyar P., School of Health Sciences, CSJM University, Kanpur, India		
23.	Artificial Intelligence for Environmental Protection: Opportunities and Challenges	Journal of Information Systems Engineering and Management	Q4	Tripathi S., Tiwari R., Roy S., Chauhan S., Shukla D., Atal Bihari Vajpayee School of Legal Studies, Chhatrapati Shahu Ji Maharaj University, Kanpur, India; Ram A., School of law and Legal Affairs, Noida International University, Noida, India	Article	10.52783/-jisem.v10i4s.508
24.	Identifying and analyzing variables in musculoskeletal health care research	Journal of Musculoskeletal Surgery and Research	Q4	Raghuwanshi A., Department of Physiotherapy, School of Health Sciences, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, India; Srivastav A.K., Department of Physiotherapy, School of Health Sciences, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, India	Review	10.25259/-JMS-R_199_2024
25.	Improving Recognition Accuracy in Multimodal Biometric Systems: A Study on Facial Traits and Fusion Strategies	Journal of Information Systems Engineering and Management	Q4	Yadav, D., Department of Computer Science & Engineering, University Institute of Engineering & Technology, C. S. J. M. University, Kanpur, India; Gupta, S., Department of Computer Science & Engineering, University Institute of Engineering & Technology, C. S. J. M. University, Kanpur, India	Article	10.52783/-jisem.v10i2s.1771
26.	Integrating Natural Language Processing with Ada Boost, Random Forest, and Logistic Regression for an Advanced Ensemble-Based Network Intrusion Detection Model	Journal of Information Systems Engineering and Management Limited	Q4	Srivani, P., Department of CSE (AI/ML), Malla Reddy Engineering College for Women, GLA University, Uttar Pradesh, Mathura, India; Sharma, H., Electronics & Communication Engineering Department, GLA University, Uttar Pradesh,, Mathura, India; Porwal, R., Department of Computer Application, School of Engineering & Technology (UIET), Chhatrapati Shahu Ji Maharaj University (CSJMU), Kanpur, India; Nagalakshmi, T., Department of Mathematics, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Tamilnadu, Avadi, 600062, India; Mercy, P., Computer Science and Business Systems, Anand Institute of Higher Technology, Chennai, India; Adudhodla, M., IT Department, CVR College of Engineering, Northern Border University, Saudi Arabia; Parveen, N., Department of Computer Science,	Article	10.52783/-jisem.v10i3s.386

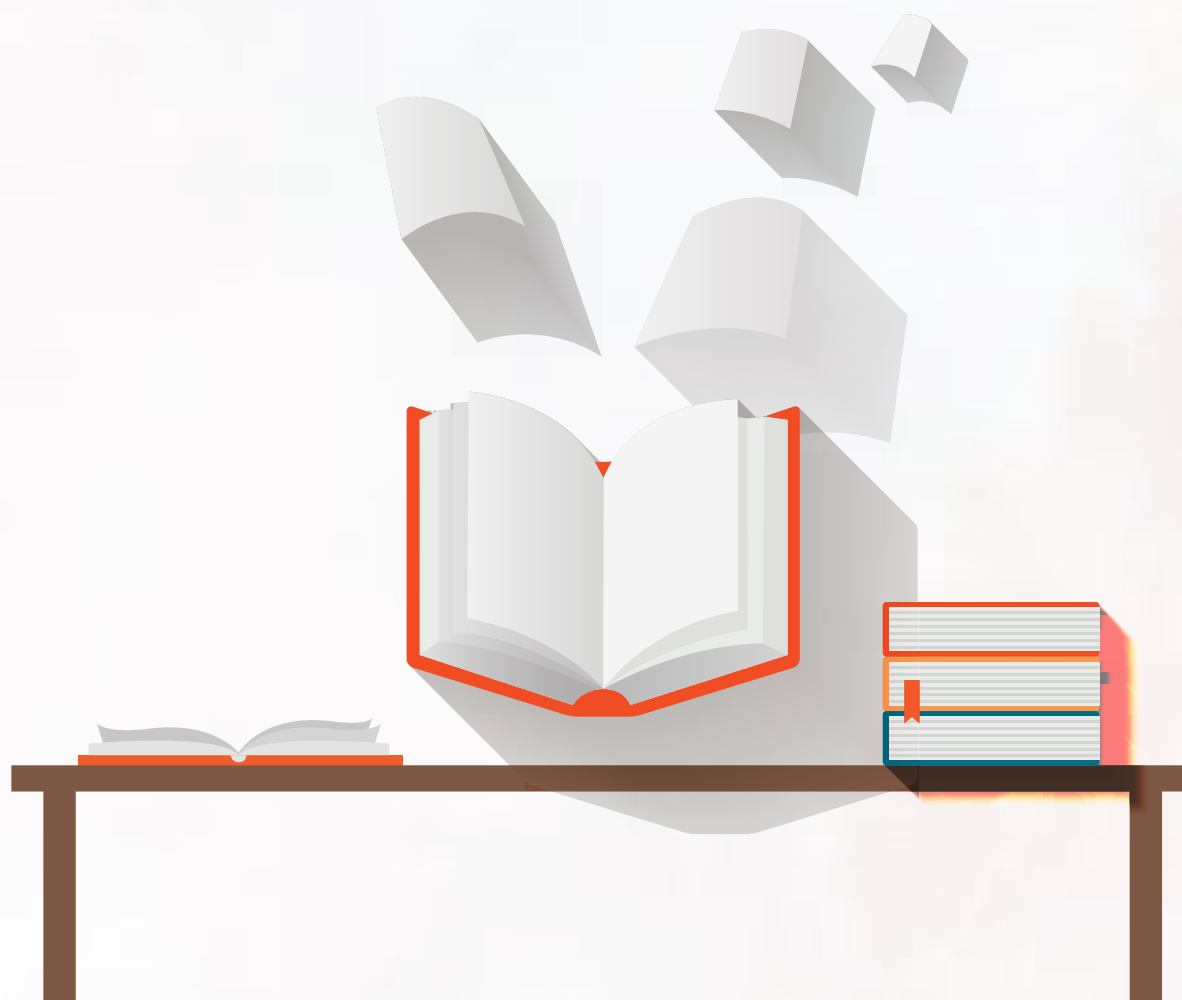
				Faculty of Computing and Information Technology, Northern Border University, Saudi Arabia		
27.	Investigation of Benzimidazole Derivatives in Molecular Targets for Breast Cancer Treatment: A Comprehensive Review	Critical reviews in oncogenesis management	Q4	Katiyar P., School of Pharmaceutical Sciences, Chhatrapati Shahu Ji Maharaj University, Kanpur, 208024, India; Kalpana, School of Pharmaceutical Sciences, Chhatrapati Shahu Ji Maharaj University, Kanpur, 208024, India; Srivastava A., School of Pharmaceutical Sciences, Chhatrapati Shahu Ji Maharaj University, Kanpur, 208024, India; Singh C.M., School of Pharmaceutical Sciences, Chhatrapati Shahu Ji Maharaj University, Kanpur, 208024, India	Review	10.1615/CritRevOncog.2024056541
28.	New Post-quantum Crypto-algorithm Utilizing Hash Function: Applicable in Blockchain	Lecture Notes in Networks and Systems	Q4	Tiwari N., Dwivedi S., Singh S., Department of Mathematics, School of Basic Sciences, CSJM University Kanpur, Kanpur, India,	Conference paper	10.1007/978-981-97-4152-6_39
29.	Quality Assurance in Higher Education Marketing: Strategies for Communicating Educational Value	Journal of Information Systems Engineering and Management	Q4	Pathak, R., Inter-University Centre for Teacher Education, BHU, Varanasi, India; Dubey, S., Department of Computer Application, School of Engineering and Technology (UIET), Chhatrapati Shahu Ji Maharaj University(CSJMU) KANPUR, India	Article	10.52783/-jisem.v10i2.1415
30.	Social Media and Knowledge Sharing: Impact on Academic Development in Public Universities of Kanpur	Journal of Information Systems Engineering and Management	Q4	Singh, S.K., Kumar, S., Saurabh, Singh, K., SBM, Chhatrapati Shahu Ji Maharaj University, India; Rastogi, S., VSSD College, Chhatrapati Shahu Ji Maharaj University, Kanpur, India; Singh, N., SBM, Chhatrapati Shahu Ji Maharaj University, India	Article	10.52783/-jisem.v10i3s.362
31.	Synergistic Effects of Physiotherapy and Nutrition in Managing Paediatric Cerebral Palsy	Journal of Neonatal Surgery	Q4	Shukla, N., Katiyar, A., Kumar, C.S., Dixit, A., Zaidi, A., School of Health Sciences, Chhatrapati Shahu Ji Maharaj University, Uttar Pradesh, Kanpur, 208024, India	Article	10.52783/-jns.v14.1627
32.	Transformers in Sentiment Analysis: A Paradigm Shift in Deep Learning Research	Journal of Information Systems Engineering and Management	Q4	Gowda K.P., Department of Electronics and Communication Engineering, Dayananda Sagar College of Engineering, VTU, Belagavi, Bengaluru, India; Porwal R., Department of Computer Application, School of Engineering & Technology (UIET), Chhatrapati Shahu Ji Maharaj University (CSJMU), Kanpur, India	Article	10.52783/-jisem.v10i5s.612

				Ramesh C., Department of Computer Science and Engineering, CVR College of Engineering, Vastunagar, Mangalpally(v), Ibrahimpatnam (m),R.R.Dist., Telangana, 501510, India; Tiwari S.S., Department of Information Technology, Rajkiya Engineering College, Ambedkar Nagar, Dr. Abdul Kalam Technical University, U.P, Lucknow, India; Srivastava K., D.J. Sanghvi College of Engineering, India; Rambabu R., Department of Computer Science & Engineering, Rajamahendri Institute of Engineering & Technology, Rajamahendravaram, India; Rao S.G., Department of Data science, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, India		
33.	E-Waste: A Leading Hazardous Waste	Global Waste Management	NA	Chandra A.K. , Department of Chemical Engineering, UIET, C.S.J.M. University, Kanpur, India; Khan W., Department of Chemical Engineering, Glocal University, Saharanpur, India; Gupta A.K. , Department of Chemical Engineering, UIET, C.S.J.M. University, Kanpur, India; Patel P.B. , Department of Chemical Engineering, UIET, C.S.J.M. University, Kanpur, India; Niranjan R.S. , Department of Mechanical Engineering, UIET, C. S. J. M. University, Kanpur, India	Book chapter	10.1002/9781394318414.ch3
34.	Green Biopolymers in Food Packaging: General Consideration and Novel Trends	Green Biopolymers for Packaging Applications	NA	Mishra P., Sharma N., Mishra A., Gupta P.C., School of Pharmaceutical Sciences, Chhatrapati Shahu Ji Maharaj University (CSJMU), Kanpur, India	Book chapter	10.1201/9781003455356-8
35.	Hybrid Sign Language Recognition Framework Leveraging MobileNetV3, Multi-Head Self Attention and LightGBM	Journal of Electronics, Electromedical Engineering, and Medical Informatics	NA	Kumar, H. , Department of Information Technology, Chhatrapati Shahu Ji Maharaj University, Kanpur, India; Sachan, R., Department of Computer Science and Engineering (AI), KIET Group of Institutions, Ghaziabad, India; Tiwari, M., Department of Computer Applications, Chhatrapati Shahu Ji Maharaj University, Kanpur, India; Katiyar, A.K., Department of Electronics and Communication Engineering, Chhatrapati Shahu Ji Maharaj University, Kanpur, India; Awasthi, N., Department of Computer Science & Engineering, Allenhouse Institute of Technology, Kanpur, India;	Article	10.35882/-jeeemi.v7i2.685

				Mamoria, P., Department of Computer Applications, Chhatrapati Shahu Ji Maharaj University, Kanpur, India; Mishra, R., Department of Information Technology, Chhatrapati Shahu Ji Maharaj University, Kanpur, India		
36.	Role of Recent Advanced Biological Technology in Removal of Fluoride	Environmental Science and Engineering	NA	Srivastava N., Department of Biochemistry, School of Life Sciences and Biotechnology, CSJM University, Kanpur, India	Book chapter	10.1007/978-3-031-77247-4_16
37.	Vrikshkosh: Application of geospatial technologies in developing curated medicinal plant database	Technologies and Innovations for Sustainable Development	NA	Tiwari M., Gupta S., Tripathi S., Department of Computer Applications, C.S.J.M. University, Kanpur, Uttar Pradesh, India	Book chapter	10.1201/9781003487012-16
38.	Senescence-associated genes (SAGs) in cotton: Genome-wide identification, phylogenetic, and expression analyses provide insight into their role in development and stress response	South African Journal of Botany	Q1/2.7	Varsha Singh, Maninder Singh, Tikshana Yadav, Mamta Yadav, Surendra Pratap Singh, Plant Molecular Biology Laboratory, Department of Botany, Dayanand Anglo-Vedic (PG) College		https://doi.org/10.1016/j.sajb.2024.11.016
39.	An Association between Socio-economic Status and Parental Engagement in Enhancing Academic Achievement in Children with Intellectual Disabilities	Library Progress (International)	Q4	Ravindra Kumar Kushwaha, Research Scholar, Department of Teacher Education, Halim Muslim PG College, Kanpur (India), Dr. Sarfaraz Ahmad, Associate Professor, Department of Teacher Education, Halim Muslim PG College, Kanpur (India)		https://doi.org/10.48165/bapas.2024.44.2.1

BOOKS PUBLISHED IN SCOPUS(2025)

Akansha Tripathi, Ankush Sachan, Madhulika Singh and Nand Lal (2025) A Comprehensive Review on Bioactive Natural Products of *Moringa oleifera* Lam.: A 'Developmental Tree' of Sub-Saharan Africa. In: Atul Kaushik & Jeevan Jyoti Kaushik (Eds.) Traditional Medicine in North East Africa. Bentham Science Publishers in press.



CONFERENCES

The International Conference on Advances in Life Sciences (ICALS-2025) was organized by the School of Life Sciences and Biotechnology at Chhatrapati Shahu Ji Maharaj University (CSJMU), Kanpur, from January 9 to 11, 2025. This conference aimed to bring together researchers, educators, and professionals to discuss the latest developments in life sciences. Participants had the opportunity to network and share their research findings, fostering collaboration across disciplines. The conference emphasized the importance of interdisciplinary approaches in addressing global challenges and served as a vibrant platform for knowledge exchange and scientific advancement.

Conference themes:

- Renewable Energy
- Biomedical Sciences
- Plant Sciences
- Cancer Biology and Applied Biology

Total number of participants: ~150 (including faculty members)

Full length articles in Scopus indexed Research Journal of Biotechnology: 25-30



Chief Guests:

-Prof. S. Ganesh,
IIT, Kanpur

-Prof. Seema Paroha, Director,
NSI, Kanpur

-Dr. Meenal Rasthore,
IIPR,
Kanpur



Conference Gallery



The 29th international conference on 'Global Issues in Multidisciplinary Research for a Digital Future', jointly organized by the School of Basic Sciences and the Forum for Advanced Training in Education and Research Academy (FATER), concluded successfully with engaging sessions and cultural performances. This conference, poster and paper presentation sessions took center stage, featuring seven keynote lectures delivered by renowned researchers from diverse fields. All speakers highlighted the critical role of artificial intelligence in shaping the future of research, underscoring its potential to drive innovation and development. The valedictory session was graced by the presence of **Mr. Partho Kar, Joint Managing Director of Jaykay Enterprises Ltd., New Delhi**, who served as the chief guest. His work stands as a testament to innovation and leadership in both the corporate and social sectors. **Professor R.K. Dwivedi** welcomed Mr. Kar with a heartfelt felicitation. **Dr. Namita Tiwari**, the convener of the conference, provided concluding remarks, emphasizing the importance of continued collaboration in research.

29TH INTERNATIONAL CONFERENCE

on

GLOBAL ISSUES IN MULTIDISCIPLINARY RESEARCH FOR A DIGITAL FUTURE

16th to 18th February 2025
(Hybrid Mode)

Jointly Organized by

**SCHOOL OF BASIC SCIENCES
CHHATRAPATI SHAHU JI MAHARAJ UNIVERSITY
KANPUR (208024), UTTAR PRADESH, INDIA
(Accredited with Grade A++ by NAAC | UGC Category-I University)**

&

**FORUM FOR ADVANCE TRAINING
EDUCATION AND RESEARCH (FATER)
ACADEMY OF INDIA**








As part of the event, a Memorandum of Understanding (MoU) was signed with **Sir Padam Pat Singhania Education Center** to establish a Vedic Mathematics certificate course, aimed to promote traditional mathematical practices in modern education.



The ceremony was graced by the presence of distinguished scholars and dignitaries, including: - **Prof. M. Premjit Singh, President of the FAI Academy of India** - **Prof. Georgia Irina Oros** from the University of Oradea, Romania - **Prof. Nina Poyda-Nosyk** from Ukraine - **Prof. C. C. Tan**, Foreign Secretary of FAI, Bangkok, Thailand - **Prof. Pankaj Srivastava**, General Secretary of FAI from MNIT Prayagraj, **Prof. Sudhir Kumar Awasthi**, Pro Vice Chancellor - **Dr. Anil Kumar Yadav**, Registrar.

Conference Gallery



PH.D THESIS DEFENCE

S.NO.	VIVA DATE	ROLLNO	STUDENTNAME	FATHERNAME	SUPERVISOR NAME	CENTRE NAME	COURSEID
1	07.01.2025	PHD202200001712	SONALI AWASTHI	SUDHIR KUMAR AWASTHI	DR. RAJIV MISHRA	C.S.J.M.U. KANPUR	PHD
2	24.01.2025	15290041	ANURADHA TIWARI	PRADHUMAN KUMAR TIWARI	PROF. MAHENDRA SINGH	B.N.D. P.G. COLLEGE KANPUR	PHD
3	31.01.2025	19190031	VINEET KUMAR VERMA	DHARAM PAL VERMA	PROF. RAJESH KUMAR TIWARI	D.A.V. P.G. COLLEGE KANPUR	PHD
4	14.02.2025	19150008	SONAM SHUKLA	M C SHUKLA	PROF. OMPAL SINGH	D.A.V. P.G. COLLEGE KANPUR	PHD
5	18.02.2025	19190015	AJAY SHANKAAR TRIPATHI	RAM SAGAR TRIPATHI	PROF. RAJESH KUMAR TIWARI	D.A.V. P.G. COLLEGE KANPUR	PHD
6	22.02.2025	19170001	SHALINI SHUKLA	SHRIKANT SHUKLA	PROF. SANJAY KUMAR SWARN	C.S.J.M.U. KANPUR	PHD



FACULTY OF THE MONTH



Dr. Surendra Pratap Singh

Dr. Surendra Pratap Singh is an Assistant Professor of Botany at Dayanand Anglo-Vedic (P.G.) College, Chhatrapati Shahu Ji Maharaj University, Kanpur since 2017. He has completed his Ph.D. (2017) in Plant Molecular Biology from CSIR-National Botanical Research Institute (NBRI), Lucknow & University of Lucknow, India, under the mentorship of Dr. Samir V Sawant (Chief Scientist, CSIR-NBRI) with the support of the CSIR fellowship. Dr Singh visited the Department of Environmental & Sustainable Engineering, University at Albany, State University of New York, USA, as a Visiting Scientist (Sept-Oct 2024). Dr. Singh has published 52 research articles in reputed journals, 31 book chapters, and 01 edited book. He holds one US patent.

Dr. Singh has established the '**Plant Molecular Biology Laboratory**' at the college with independent funding and is working on cotton functional genomics, gene expression, GWAS, and genetic and genome engineering. The PMB lab is focused on improving cotton fiber quality and yield and developing stress-resilient cotton plants by identifying novel genes and pathways.

We have recently identified autophagy-related genes (ATG), senescence-associated genes (SAG), and iron homeostasis-related genes (FRO) in cotton. Their downstream characterization has been done. Interestingly, we find that the ATG8 subfamily genes are potential genes for abiotic stress tolerance and fiber development by modulating the autophagy pathway in cotton (SERB-SRG Project 2019). Similarly, senescence-associated genes (SAG) are also characterized in cotton (CVR Project, 2022). We have found that the Ferric reductase oxidase (FRO) interacts with NRAMP and regulates diverse functions in cotton (UPHED Project, 2023). Moreover, the PMB lab is working on novel genes like Protease Inhibitors (CVR Project, 2024), GLABROUS1 enhancer-binding protein (GeBP) genes, Bcl2-associated athanogene (BAG) genes, ACO genes, etc. The Anusandhan National Research Foundation (ANRF) approved Core Research Grant (ANRF-CRG, 2024) to study the strigolactone (a plant hormone) biosynthetic and signaling pathways during fiber development and stress responses in cotton. PMB is also working on the ethylene-regulated two-component system, ETR1, and its role in cotton fiber development. We have established an in-vitro cotton ovule culture technique. This serves as a single-cell model to screen various chemical modifiers that may potentially enhance the quality and yield of cotton fiber and help to identify the underlying mechanism using genomics and cell biology approaches.

The potential modifiers can be applied as a spray in cotton fields to enhance cotton production. Overall, the PMB lab investigates genes associated with fiber improvement, focusing on fiber quality and production through genome-wide identification approaches and the functional characterization of the identified genes. Another aspect involves identifying crucial genes and pathways for abiotic and biotic stress tolerance in cotton. Besides cotton, PMB is also working on various aspects with the model plant *Arabidopsis*, tobacco, pearl millet, and tomato.



Dr. Surendra and team

Dr. Singh is also involved in part of his PhD research in developing a reversible male sterility system that uses transcription regulation and engineering of the anther tapetum (US Patent 2021). Furthermore, it was found that Arabidopsis BECLIN1-induced autophagy mediates reprogramming during tapetal programmed cell death by altering the overall cellular homeostasis (Plant Physiology and Biochemistry, 2024). This spatiotemporal regulation of the anther's tapetum degeneration paved the way for a reversible male sterility system in cotton (Plant Biotechnology Journal, 2025). These studies are led by my mentor, Dr. Samir V. Sawant, chief scientist at CSIR-NBRI, Lucknow. PMB Lab also offers bioinformatics and molecular biology training. Five students completed two months of research internship training sponsored by the SERB-Accelerate Vigyan Scheme Vritika (2022), and two students are sponsored by the SERB-SSR scheme (2021) in addition to regular PG MS interns. Under the CSJM University PhD program, Ms. Mamta Yadav has submitted her PhD (2024). The students pursuing PhDs are Ms. Varsha Singh, Ms. Kajal Verma, Ms. Kavita Nanda, Ms. Tikshana Yadav, Ms. Nikita Srivastava, Mr. Kaushalendra Kumar, and Ms. Niharika Dubey. Ms. Versha Singh was awarded the two-month IASc-INSA-NASI Summer Research Fellowship 2023 for Bose Institute, Kolkata. Everyone is actively involved in receiving cutting-edge training, delivering oral and poster presentations, and earning awards at conferences.

Dr. Singh has been awarded several research grants (> 1 Crore) from the Department of Science and Technology-Science and Engineering Research Board (DST-SERB); Core Research Grants (ANRF-CRG, 2024), Startup Research Grants (SERB-SRG, 2019), Teachers Associationship for Research Excellence (SERB-TARE, 2019), and SERB-Accelerate Vigyan (SERB-Vritika, 2022). He has also received CV Raman Research Grants (twice: 2022 & 2024) and research funding from the DHE, Government of Uttar Pradesh (2023). He serves as Co-PI in two institutional projects of ICAR-Indian Institute of Seed Science (IISS), Mau (2021-23). He has received several awards, including Shri Govind Hari Sighania Research Award from CSJM University, Kanpur (2023 & 2024). He has received SERB- International Travel Support (ITS) to participate in the FEMS18 in Hamburg, Germany (2023). Also, in ISME18 in Lausanne, Switzerland (2022). Dr Singh joined the editorial board of several journals, including Plant Biotechnology Reports (Editor, Springer Nature Journal), Frontiers in Plant Science (Guest Associate Editor), and Frontiers in Microbiology (Guest Associate Editor), and is an active reviewer of prestigious journals.



STUDENT OF THE MONTH

Dr. Sonali Awasthi Successfully Defends Her Ph.D. and Secures Prestigious Postdoctoral Position in the USA. We are delighted to share that Dr. Sonali Awasthi successfully defended her Ph.D. thesis titled **Prognostic Significance of Mitochondrial Gene Expression and Its Co-Relation with Immune Cell Infiltration in HNSCC** in January 2025. Her research, which provides valuable insights into the molecular mechanisms underlying head and neck squamous cell carcinoma (HNSCC), has been recognized through two Scopus-indexed publications.



Dr. Sonali Awasthi submitting her Dissertation

Dr. Awasthi's dedication and contributions to the field have earned her a prestigious postdoctoral position in the United States of America, where she will continue her research in cancer. Her research, which provides valuable insights into the molecular mechanisms underlying head and neck squamous cell carcinoma (HNSCC), has been recognized through two Scopus-indexed publications. Dr. Awasthi's dedication and contributions to the field have earned her a prestigious postdoctoral position in the United States of America, where she will continue her research in cancer biology. This achievement marks a significant milestone in her academic journey, and we extend our heartfelt congratulations on her well-deserved success.

We wish Dr. Awasthi the very best in her future endeavors and look forward to her continued contributions to scientific research.

GRANTS



Dr. Dipesh Verma Secures Prime Minister Early Career Research Grant for Retinitis Pigmentosa Study.

We are thrilled to announce that **Dr. Dipesh Verma has been awarded the prestigious Prime Minister Early Career Research Grant (ANRF-ECRG)**, receiving funding of **Rs. 60 lakh** for his research on photoreceptor biology and retinitis pigmentosa. Dr. Verma's research focuses on understanding protein distribution and transport in photoreceptor cells, aiming to uncover the mechanisms behind retinitis pigmentosa, a group of rare eye diseases affecting the retina. Utilizing the frog model, which has larger photoreceptor cells than other animals, his study seeks to provide crucial insights into this condition. This generous funding will significantly enhance his research capabilities, supporting advancements in scientific discoveries, high-impact publications, and the exploration of potential therapeutic approaches for retinal disorders.

We extend our heartfelt congratulations to Dr. Dipesh Verma on this remarkable achievement and look forward to the groundbreaking contributions his work will bring to vision science!



Dr. Rajeev Mishra and Dr. Anuradha Kalani Secure CST UP Research Grant.

We are pleased to announce that **Dr. Rajeev Mishra (Project Investigator)** and **Dr. Anuradha Kalani (Co-Project Investigator)** have been awarded a CST UP research grant for their project titled: **The Role of Telomere in Regulating Stem Cell Phenotype in Triple Negative Breast Cancer.** The project has received financial support of **Rs. 18.36 lakh** for a duration of three years, as confirmed in the grant sanction letter received via email on August 16, 2024. This research aims to investigate the critical role of telomeres in stem cell regulation, contributing to a deeper understanding of triple-negative breast cancer. Dr. Mishra and Dr. Kalani extend their heartfelt gratitude to CST UP for their generous support and reaffirm their dedication to advancing research in this significant area.

We congratulate them on this outstanding achievement and wish them continued success in their scientific endeavors!



Dr. Anuradha Kalani and Dr. Rajeev Mishra Secure CST UP Research Grant

We are delighted to announce that **Dr. Anuradha Kalani (Project Investigator)** and **Dr. Rajeev Mishra (Co-Project Investigator)** have been awarded a prestigious research grant from CST UP for their project titled **Management of Diabetic Kidney Disease through Carnosine Synthase and miR-3473b.** The project has received financial support of **Rs. 15.36 lakh** for a duration of three years. This research aims to explore novel therapeutic strategies for managing diabetic kidney disease, a growing health concern.

We congratulate them on this remarkable achievement and wish them great success in their research endeavors!

UPCOMING PROJECTS/ GRANTS / FELLOWSHIPS AND OTHERS

Human Frontier Science Program (HFSP) Grants - For innovative research at the frontiers of the life sciences.(18 March 2025)

European Research Council (ERC) Grants - For pioneering research across all fields.(October 2025)

National Institutes of Health (NIH) Research Grants - For health-related research in the USA.(15 July 2025)

Wellcome Trust Research Fellowships - For biomedical research in the UK.(not yet available)

Japan Society for the Promotion of Science (JSPS) Research Fellowships - For research in Japan.(6 June 2025)

Australian Research Council (ARC) Grants - For research projects in Australia.(26 March 2025)

National Science Foundation (NSF) Grants - For research and education in the USA.(18 June 2025)

Canada Research Chairs Program - For outstanding researchers in Canada.(22 April 2025)

National Natural Science Foundation of China (NSFC) Grants - For research in China.(20 March 2025)

European Commission Horizon Europe Grants - For research and innovation projects across Europe.(20 April 2025)

Brain & Behavior Research Foundation (BBRF) Young Investigator Grants - For psychiatric research worldwide.(12 March 2025)

National Psoriasis Foundation Bridge Grants - For psoriasis research worldwide.(1 April 2025)

American Physical Society (APS) Dannie Heineman Prize for Mathematical Physics - For mathematical physics research worldwide.(3 June 2025)

American Society of Hematology (ASH) Bridge Grant - For hematology research worldwide.(1 May 2025)

American Association for Cancer Research (AACR) Ocular Melanoma Foundation Research Fellowship - For ocular melanoma research worldwide.(8 April 2025)

Leo Foundation Research Grants - For dermatology research worldwide.(31 July 2025)

Independent Research Fund Denmark - For research projects in Denmark.(29 April 2025)

Inter-American Foundation - For research projects in Latin America.(31 May 2026)

International Brain Research Organization (IBRO) Grants - For neuroscience research worldwide.(15 April 2025)

National Human Genome Research Institute (NHGRI) Grants (5 June 2025)

Fellowships

Chevening Scholarships - For future leaders, influencers, and decision-makers from around the world. (10 July 2025)

Fulbright Program - For international educational exchange for students, scholars, and professionals. (21 March 2025)

Erasmus Mundus Joint Master Degrees - For master's degree programs across Europe.(12 March 2025)

DAAD Scholarships - For international students to study or conduct research in Germany.(31 March 2025)

Rotary Peace Fellowships - For leaders in peace and conflict resolution.(15 May 2025)

AAUW International Fellowships - For women pursuing full-time graduate study abroad.(15 April 2025)

Knight-Hennessy Scholars Program - For exceptional Stanford University graduate students.(October 2025)

Lloyd's of London Underwriting Doctoral Scholarships - For PhD students in the UK.(31 May 2025)

Marshall Scholarships - For outstanding young Americans to study in the UK.(22 September 2025)

Swiss Government Excellence Scholarships - For postgraduate education and research in Switzerland.(1 September 2025)

International Fellowships

Fulbright Fellowship (15 May 2025)

Rhodes Scholarship (open in June 2025)

Chevening Scholarship (start in June)

Erasmus Mundus Scholarship (12 March 2025)

Marie Skłodowska-Curie Actions (MSCA) (10 September 2025)

Commonwealth Scholarship (December 2025)

Rotary Peace Fellowship (15 May 2025)

International Fulbright Science and Technology Award (31 May 2025)

Ford Foundation Fellowship (5 January 2026)

Andrew W. Mellon Foundation Fellowship (31 March 2025)

Research Projects

National Science Foundation (NSF) (18 June 2025)

European Research Council (ERC) (14 January 2025)

Wellcome Trust (several deadlines)

Bill and Melinda Gates Foundation (25 March 2025)

Google Research Awards (27 January 2025)

Microsoft Research Awards (mid-March 2025)

IBM Research Awards (15 March 2025)

National Institutes of Health (NIH) (25 January 2025)

National Aeronautics and Space Administration (NASA) (16 May 2025)

European Space Agency (ESA) (several)

Regional Fellowships

Asia-Pacific Fellowship Program (31 March, 2025)

African Fellowship Program (23 march 2025)

Latin America Fellowship Program (19 August 2025)

Middle East and North Africa (MENA) Fellowship Program (28 Feb 2025)

South Asia Fellowship Program (31 January 2025)

Southeast Asia Fellowship Program (25 January 2025)

East Asia Fellowship Program (9 March 2025)

Discipline-Specific Fellowships

National Institute of Health (NIH) Fellowship (Health and Biomedical Sciences) (25 January 2025)

National Aeronautics and Space Administration (NASA) Fellowship (Space and Aeronautics) (28 feb 2025)

Microsoft Research Fellowship (Computer Science and related fields) (15 Feb 2025)

IBM Research Fellowship (Computer Science and related fields) (not yet started)

Google Fellowship (Computer Science and related fields) (27 January 2025)

Facebook Fellowship (Computer Science and related fields) (16 March 2025)

Amazon Fellowship (Computer Science and related fields) (March 2025)

Postdoctoral Fellowships

Postdoctoral Research Fellowship (PRF) (19 November 2025)

National Postdoctoral Association (NPA) Fellowship (not yet started)

American Association for the Advancement of Science (AAAS) Fellowship (1 october 2025)

National Science Foundation (NSF) Postdoctoral Fellowship (29 October 2025)

European Research Council (ERC) Postdoctoral Fellowship (28 August 2025)

PhD Fellowships

Fulbright PhD Fellowship (mid-May 2025)

Rhodes Scholarship for PhD studies (not yet started)

Chevening PhD Scholarship (november 2025)

Erasmus Mundus PhD Scholarship (12 March 2025)

Marie Skłodowska-Curie Actions (MSCA) PhD Fellowship (25 November 2025)

Master's Fellowships

Fulbright Master's Fellowship (15 may 2025)

Chevening Master's Scholarship (not started yet)

Erasmus Mundus Master's Scholarship (mid-march 2025)

Commonwealth Master's Scholarship (mid-october 2025)

Rotary Peace Fellowship for Master's studies (15 May 2025)

Undergraduate Fellowships

Fulbright Undergraduate Fellowship (30 April 2025)

Chevening Undergraduate Scholarship (5 November 2024)

Erasmus Mundus Undergraduate Scholarship (mid march 2025)

Commonwealth Undergraduate Scholarship (December 2025)

National Science Foundation (NSF) Undergraduate Fellowship (18 June 2025)

