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•OCTOBER 2026 | VOLUME 1 | ISSUE 4•

From the Executive Desk

SDU's Collaborations Hub

Thank you for your overwhelming engagement with the previous editions of The Frontier—your support is the true driving force behind our vibrant academic dialogue. As we continue to celebrate institutional achievement, we also look forward to formally recognizing our dedicated research mentors and the scholars who recently secured milestone extramural grants at our upcoming felicitation forum - Research excellence awards ceremony on Nov 13, 2026.

True scientific breakthroughs rarely happen in isolation; they thrive where bold ideas meet world-class infrastructure. Over the past few months, we have actively expanded that horizon by forging **high-impact partnerships** that unlock elite scientific platforms for our researchers.

Through our partnership with the **SATHI Foundation at IIT Delhi,** our investigators now gain direct access to cutting-edge analytical instrumentation for work in biomaterials, medical devices, dentistry, biochemistry, and environmental health. In parallel, our association with the **Inter-University Accelerator Centre (IUAC), New Delhi**—under the Department of Science and Technology—grants zero-cost access to frontier facilities such as ion beam lines and nuclear microprobes, enabling rigorous exploration in cellular damage, radiation biology, and nanoparticle characterisation.



Prof. Dr. V. N. Mahalakshmi
Vice Chancellor, SDU

Taking our footprint further, Santosh Deemed to be University is now officially onboarded onto **UNESCO's Remote-Access Science Infrastructure Platform** as both a Service Provider and a Receiving Partner. This milestone unlocks five strategic gateways: remote equipment hosting, direct access to global instrumentation, sample-processing partnerships for multi-centric trials, in silico computational consortia, and elevated grant competitiveness.

The platforms are elite, the access is open, and the opportunity is ours. I encourage our faculty, clinicians, and young scholars to build these powerhouse capabilities into your research designs from day one. Let us collaborate boldly and shape the future of healthcare discovery together!

The Global Narrative

THE LIGHT SWITCH FOR THE BRAIN: DECODING OPTOGENETICS AND ITS FUTURE.

Nobel Prize-winning research on light-activated neural circuits and molecular engineering. | October 05, 2026

Dr. Juhi Aggarwal,
Professor & Head, Department of Biochemistry, SMCH

Bringing Optogenetic Insights Closer to Patient Care

Optogenetics completely shifts neuroscience from passive correlation to direct causation. This framework supports clinicians and researcher-clinicians to:

- **Interpret and manipulate** targeted neural circuits with millisecond-level precision.
- **Support disease and treatment research** for complex neuropsychiatric conditions.
- **Identify functional pathways** for targeted psychiatric and deep-brain monitoring.
- **Advance personalized and precision medicine**, ending into active visual restoration therapeutic strategies.



What Happens When We Control Brain Cells with Light?

The field of neurobiology has been radically transformed by the pioneering work of **Dr. Karl Deisseroth** (Stanford University), **Dr. Peter Hegemann** (Humboldt University of Berlin), and **Dr. Georg Nagel** (University of Würzburg). Together, these laureates developed and expanded **Optogenetics**—a revolutionary biological methodology that bridges genetics and optics to control the activity of individual living neurons using precise bursts of light. By discovering and adapting light-sensitive algal proteins, their study successfully overcame decades of technical limitations, granting scientists the ability to turn specific neural circuits on or off with millisecond-level precision.

The Core Question

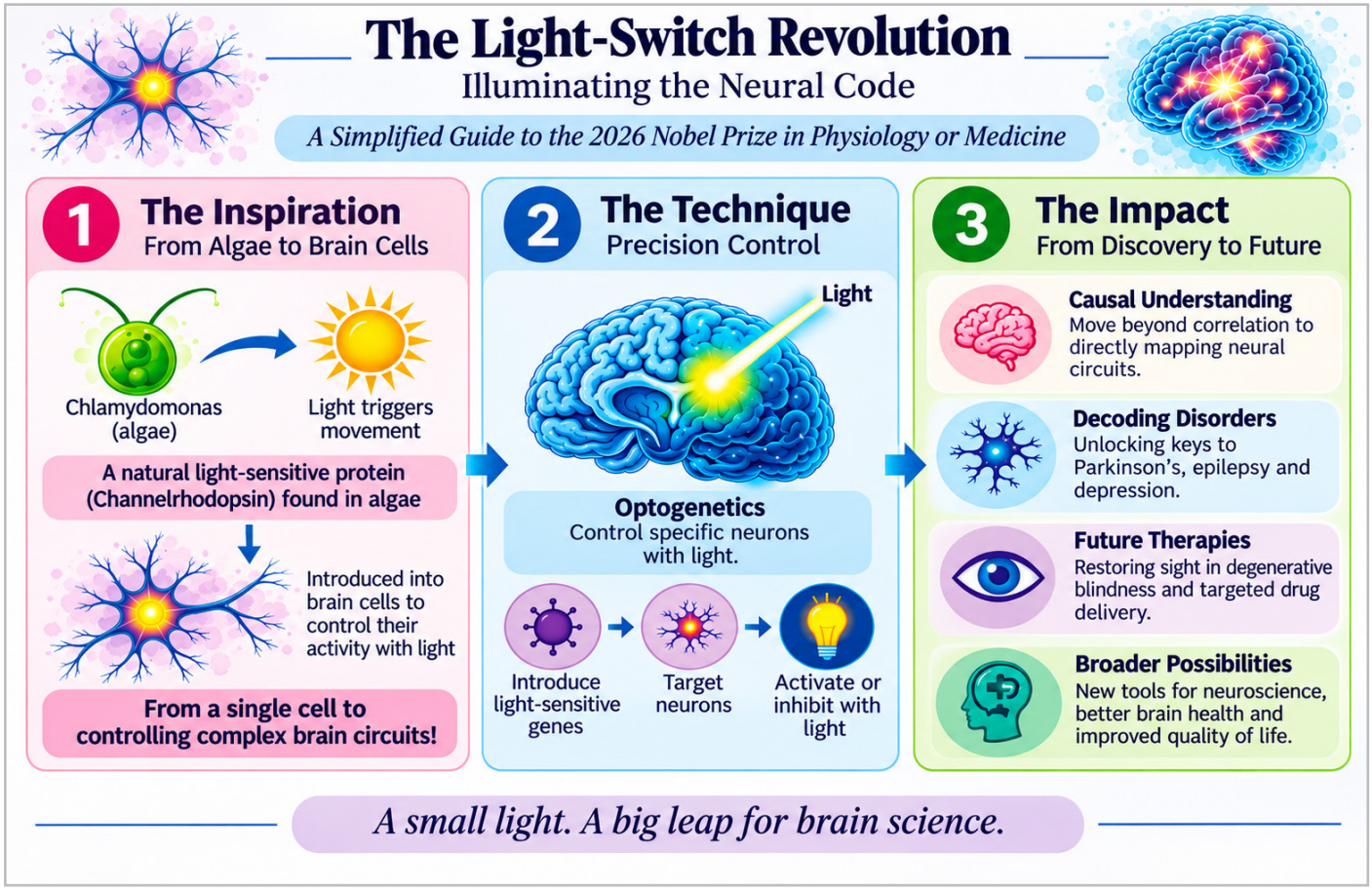
For decades, neuroscientists faced a massive technological bottleneck: they could onlyobserve neural networks passively or stimulate brain tissue using crude tools like electrodes, which activated thousands of mixed cell types indiscriminately. The fundamental challenge was achieving cellular-level resolution. Researchers needed away to selectively control individual neurons with millisecond-level temporal precision within living tissue to determine exactly how specific neural circuits drive behaviour and disease.

Key Findings: The Mechanism of Action

- **Nature's Blueprint:** The technique utilizes channel-rhodopsin, a specialized light-gated ion channel protein discovered in single-celled green pond algae (Chlamydomonas).
- **The Cellular Switch:** When struck by target blue light, this algal protein instantly opens its channel, allowing charged ions to flood across the cell membrane and trigger a precise electrical impulse.
- **The Genetic Leap:** Researchers successfully transferred the gene encoding this light-sensitive protein into mammalian nerve cells via viral vectors, making specific targeted neurons responsive to light.
- **Fiber-Optic Control:** By threading microscopic fiber-optic cables into living models, scientists proved that millisecond-precise micro-bursts of light can reliably switch targeted neural circuits on or off without altering neighboring networks.

From Cellular Mechanism to Clinical Impact

Optogenetics completely shifts neuroscience from passive correlation to direct causation. Instead of guessing how circuits interact, scientists can instantly trigger or suppress specific pathways to see if a memory, emotional state, or motor symptom manifests or ceases. This has revolutionized our understanding of complex neuropsychiatric conditions—including Parkinson's disease, addiction, clinical depression, epilepsy, and dementia. On a translational level, these frameworks are transitioning into clinical reality, with active human trials successfully utilizing lightdetecting algal proteins to restore functional vision to patients suffering from degenerative retinal diseases.



Implications for Santosh Deemed to be University

Santosh Deemed to be University can advance healthcare innovation by establishing a centralised Centre for Advanced Biophotonics and Optogenetics, supporting translational research in neurodegenerative disorders and precision surgery. Integrating light-based technologies into postgraduate curricula and clinical training can strengthen medical education through immersive, simulation-based learning. Strategic industry partnerships and specialised fellowship programmes can further position the University as a regional hub for emerging medical technologies, clinical research and next-generation healthcare innovation.

Journal Showcase

THE MIND IS THE NEW EPIDEMIC: SANTOSH RESEARCHER PUBLISHES THE ASIA PACIFIC'S MOST URGENT HEALTH WAKE-UP CALL



Prof. (Dr.) Moattar Raza Rizvi,
Dean Allied Health Sciences,
Santosh Deemed to be University

The study aimed to provide the first comprehensive regional assessment of adolescent health — covering burden of disease, mortality, and key risk factors — across 44 Asia Pacific nations, to identify urgent intervention priorities for the 1.93 billion adolescents the region is home to.

When a Santosh faculty's name lands in the world's most-read medical journal, the entire institution leans in.

Santosh Deemed to be University proudly congratulates **Dr.Rizvi** on his publication in The Lancet Child & Adolescent Health (IF 13.4) — the **#1 ranked journal in Paediatrics** worldwide. As a collaborator on the landmark **GBD 2023 Asia Pacific Adolescent Health Study,** Dr. Rizvi joins a global consortium that analysed health data from **44 countries,** covering **1.93 billion adolescents** aged 10–24 years across the Asia Pacific region from 2000 to 2023.

The findings are impossible to ignore. **Mental disorders now account for nearly 65% of adolescent disease burden.** Obesity is rising in every single country. Binge drinking is spreading faster than interventions can keep up. **637,496 adolescent deaths** were recorded in 2023 alone. The study issues an urgent call for multi-sectoral policy action — before an entire generation pays the price.

Scan this QR code to read the Full Article.



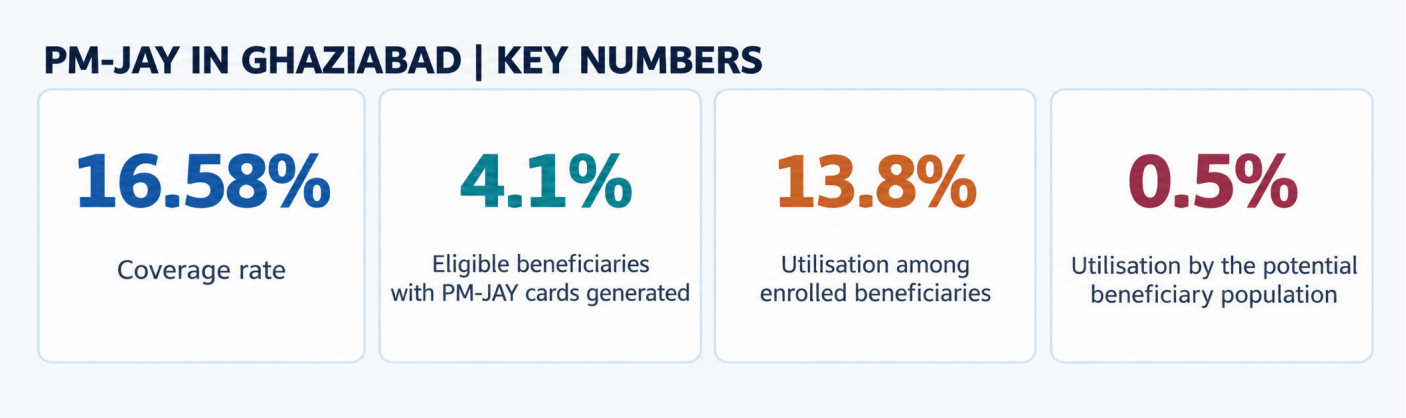
Scholar Sphere: Research Decoded

Ayushman Bharat in Ghaziabad: From Entitlement to Access

Why was the study needed?

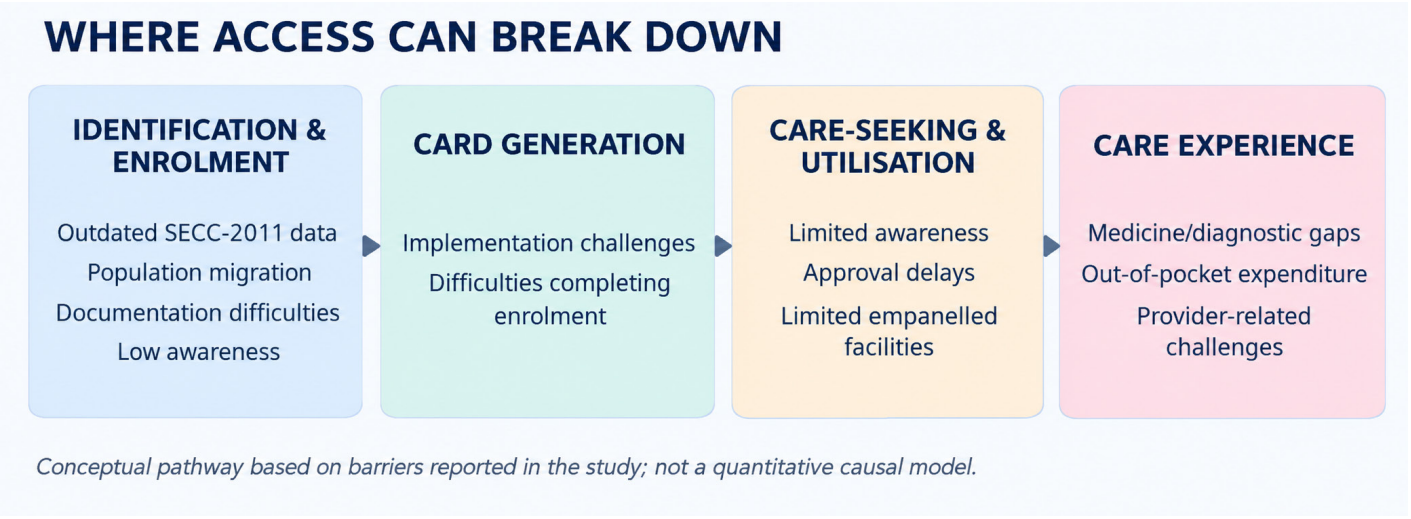
Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (PM-JAY) seeks to protect vulnerable households from catastrophic health expenditure. However, having an entitlement does not necessarily translate into actual access to healthcare. This mixed-methods study assessed the implementation of PM-JAY in Ghaziabad and explored barriers affecting coverage, enrolment and utilisation at policy, community and provider levels.

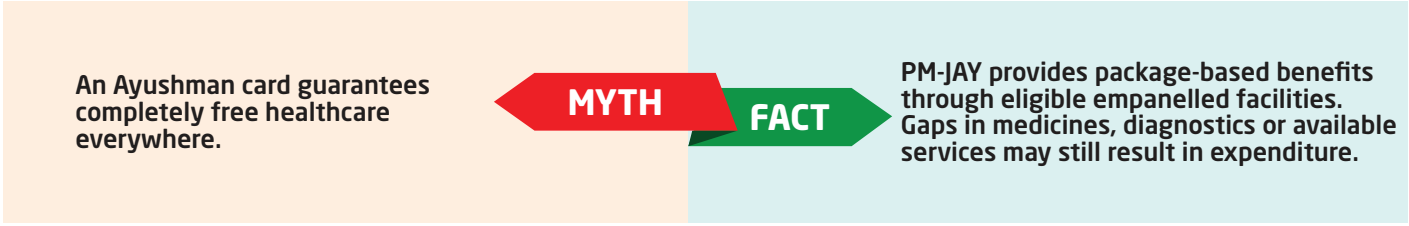
Key Numbers at a Glance



What did the study find?

Coverage and enrolment remained substantially below the potential population. Outdated SECC-2011 data, population migration, documentation difficulties, inadequate awareness and implementation challenges contributed to exclusion and low card generation. Among enrolled beneficiaries, utilisation was also limited. Lack of awareness, delays in approvals, inadequate availability of medicines and diagnostics, out-of-pocket expenditure, limited empanelled facilities and provider-related challenges emerged as important barriers.





Policy Implications

The study highlights the need for updated beneficiary databases, simpler enrolment, stronger IEC/SBCC, village-level facilitation, wider empanelment, revised health benefit packages, timely provider payments, effective grievance redressal and stronger digital monitoring and accountability.

The Key Lesson

Update	Simplify	Strengthen	Improve
Beneficiary databases	Enrolment and facilitation	Awareness and grievance redressat	Empanelment, payments and monitoring



Annu Sharma
PhD Scholar



Dr. Deepika Agrawal (Guide)
Professor, Community Medicine

The key lesson

"Expanding health insurance coverage must go hand in hand with ensuring meaningful access to quality healthcare."

Upcoming Event

Guest Lecture on Resoure Mobilization for Research

SANTOSH Deemed to be University
(Established u/s 3 of the UGC Act, 1956)

Guest Lecture on
Resource Mobilization for Research



Resource Person
Dr. Stuti S Bhargava
Scientist E (Medical)
Division of NCD, ICMR

Date: 02nd November 2026 | Time: 2:00 - 3:30 P.M | Venue: MEU, 2nd Floor, Santosh Deemed to be University, Ghaziabad (Delhi NCR)

Scan this QR code to join the session online on Google Meet

Organised by
Research Division, SDU

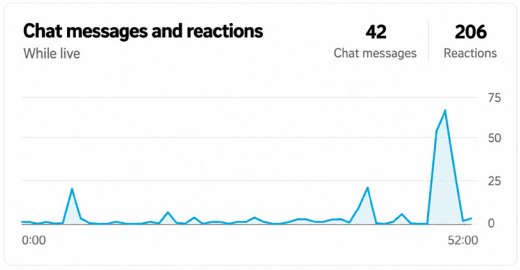
Altmetric Highlight

BDS White Coat Ceremony 2026-27 Youtube Live

The BDS White Coat Ceremony of Santosh Dental College & Hospitals, held on 26th September 2026, marked a significant milestone in the professional journey of the incoming BDS Batch 2026-27. The ceremony celebrated the students' transition into the healthcare profession as they donned their white coats for the first time and took their solemn pledge to uphold the values and responsibilities of patient care.

Streamed live on YouTube, the ceremony extended its reach beyond the campus, connecting with students, parents and the wider university community. The livestream garnered **1,409 views, 22.4 hours of watch time and 827 unique viewers,** alongside **548 engaged views.** Audience interaction included 42 live chat messages and 206 reactions, while the channel gained four new subscribers.





Scan this QR code to watch the video

5641	5.8%	1410	827	548	22.4 hrs
Impressions times the thumbnail was shown	**Click-through rate** people who clicked after seeing it	**Views** times the video was watched	**Unique viewers** different people who watched	**Engaged views** viewers who kept watching	**Total watch time** all viewers combined

These digital engagement metrics reflect the ceremony's online reach and the community's participation in celebrating the next generation of dental professionals.

Students' Corner

First Position for Santosh at a National Conference

Ms. Ayushi Singh, Ph.D. Scholar (Department of Biochemistry), under the guidance of Dr. Jyoti Batra, Prof. & Dean Research, won **1st Position in the Scientific Paper Presentation** at the One Day National Conference held on 19 September 2026 at People's University, Bhopal, and received a Certificate of Appreciation. Themed "Transformation Approaches in Health Science, Educational Technology and Innovation," the conference was endorsed by the M.P. Council of Science and Technology. This forum gives an academic platform to present findings and exchange scientific knowledge. Its emphasis was on innovative technologies, interdisciplinary research and evidence-based approaches to improving healthcare practice and educational methods. Her winning paper was titled "A Cross-Sectional Study of Iron Profiling and Apolipoprotein Polymorphism in Alzheimer's Disease with Frontotemporal Dementia in a North India Population." This national recognition strengthens the university's research standing. Congratulations, Ayushi!



Extramural Engine

Research Excellence Awards 2026: Honouring the Drivers of Our Extramural Engine

Behind every funded study is a story of persistence: a proposal refined through many drafts, a grant won against steady competition, a student guided from first question to final result.

On Friday, 13th November 2026, Santosh Deemed to be University will celebrate the faculty who write these stories.

An evening of recognition will be followed by a Celebration Dinner, a fitting setting to honour those who bring external funding to our laboratories and shape the next generation of researchers.



Author Spotlight

One Faculty. Five Publications. Nine Months. Proud moment for Santosh

Dr. Ashish Kumar Shukla's research lives at the **intersection of diagnostic radiology and artificial intelligence** – where an MRI scan stops being a picture and starts being a prediction. From mapping the spectrum of gynecological pelvic masses to deploying AI for early brain disorder detection and navigating the complexity of orthopaedic oncology, his work asks a consistent question:

Can a machine see what human eyes might miss?

Santosh Deemed to be University proudly shines the spotlight on Dr. Ashish Kumar Shukla, who has achieved something that most academics struggle to do in years – 5 original research articles published in Q2 journals, all within just 9 months of 2026.



Dr. Ashish Kumar Shukla
Professor and Head
Department of Radio-Diagnosis
Santosh Medical College

Scan the QR code to know more about Dr. Shukla's Publication

Clinical Trial Floor

Heat, Heal, Repeat: Santosh's Cancer Research Goes Pre-Clinical

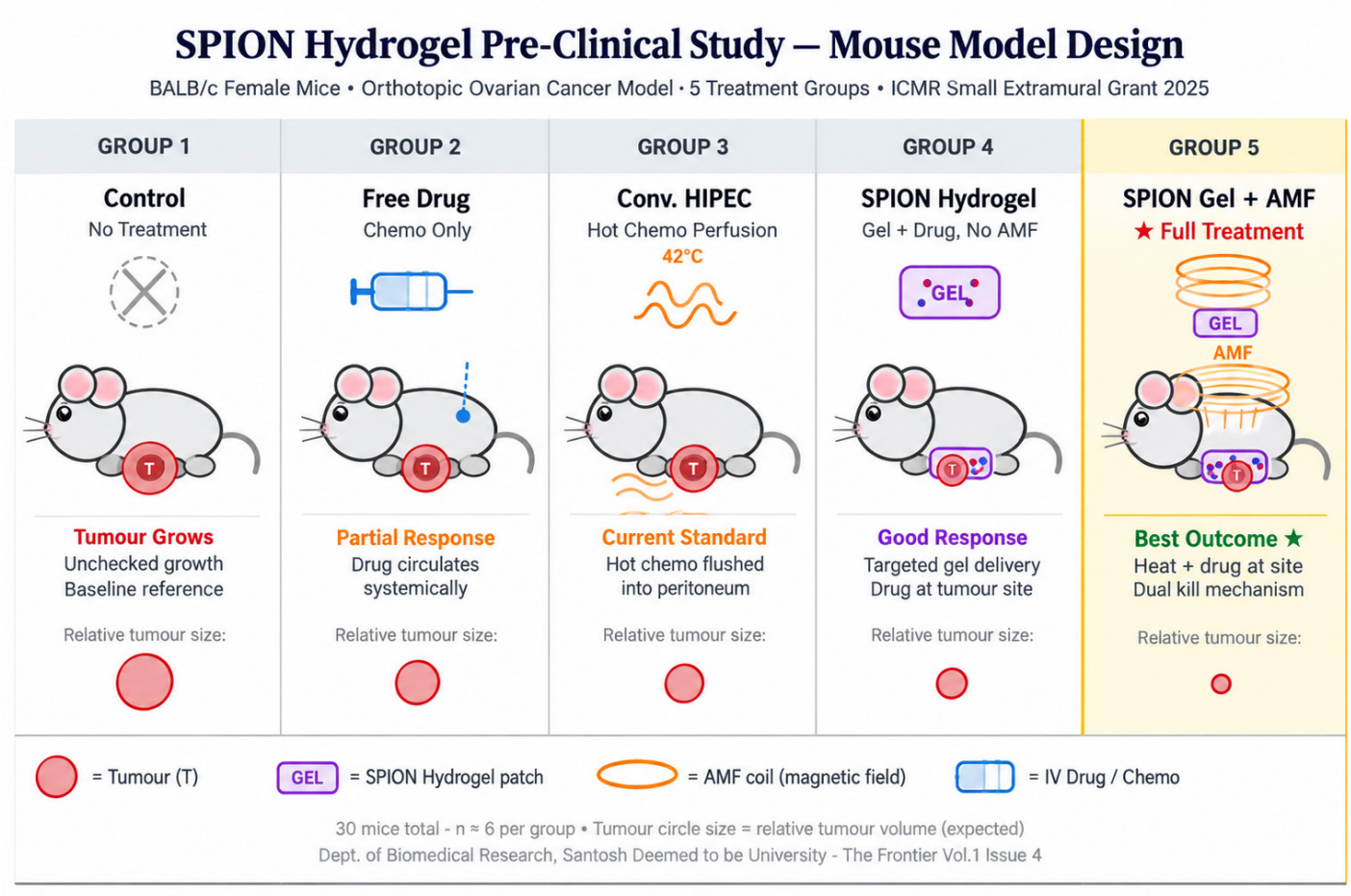
The animals are in. The real experiment is about to begin. Cancer Doesn't Know What's Coming.

Santosh's Department of Biomedical Research has crossed a critical milestone in an ICMR-funded cancer research project –**mice are now in place,** and pre-clinical experiments are about to launch.

The science: researchers have engineered a smart gel packed with **magnetic nanoparticles (SPIONs)** that, when triggered by an external magnetic field, heats up – killing tumour cells from the inside while simultaneously releasing chemotherapy drugs. Precise. Targeted. Minimal side effects.

Think of it as a Trojan horse for cancer – it looks harmless, slips past defences, and then turns up the heat exactly where it needs to.

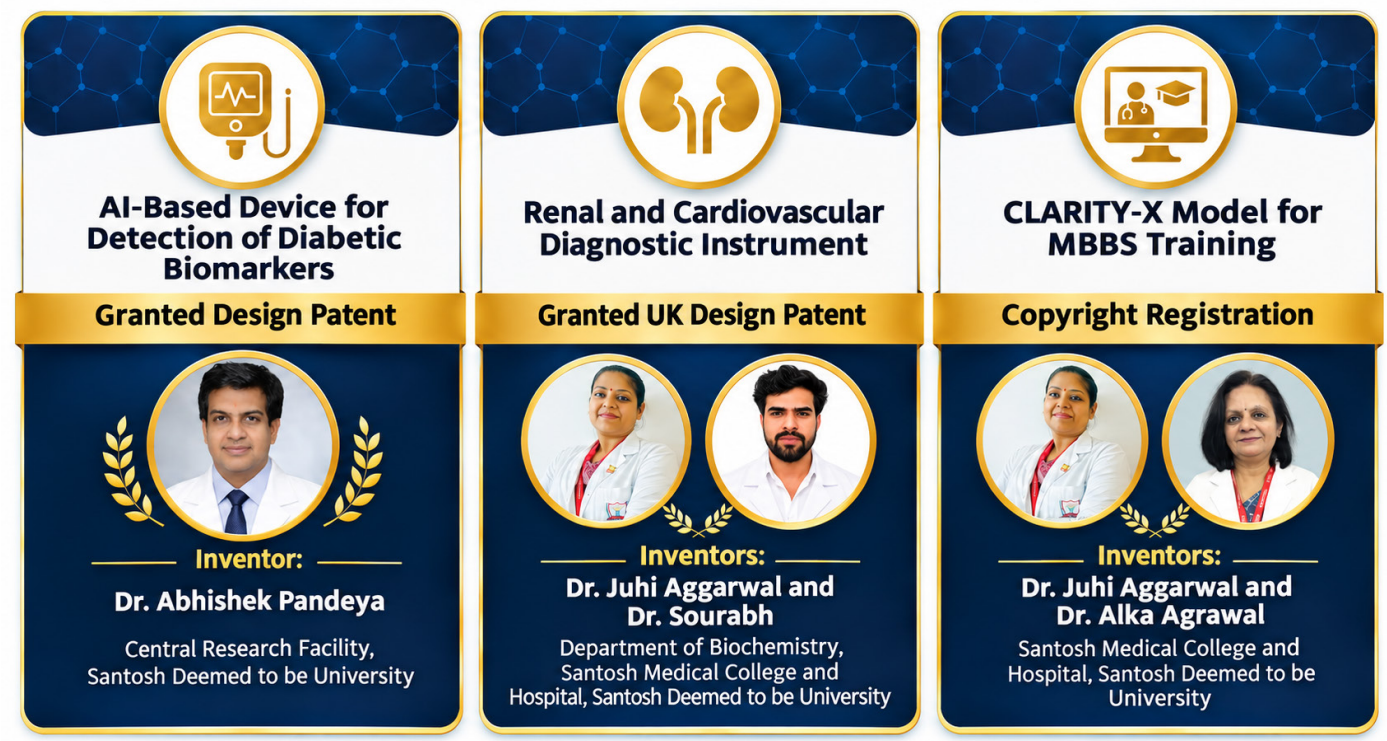
The mice will be divided into five groups – control, standard chemo, conventional HIPEC, and two SPION-hydrogel treatment arms – with tumour response, survival, and toxicity all under the microscope



From nanoparticles in a flask to a living model. The next chapter of this study has a heartbeat.

Innovation Ledger

Patents & Copyrights | Intellectual Property Achievements



Research Matchmaking

Seeking Research Collaborators!



Seeks Partner →

?

Dr. Abhishek Pandeya
Asst. Professor,
Department of Biomedical Research

Research Project: Exploring the Neuroprotective and Mitochondrial Restorative Potential of Mesenchymal Stem Cells in Alzheimer's Disease: An Integrated Stem Cell-Based Therapeutic Approach

The Ask: Alzheimer's doesn't wait — and neither should the research. Dr. Pandeya is building a translational research team to take this work from bench to bedside. **If you are a clinician or faculty member from Neurology** with an interest in neurodegeneration, clinical biomarker validation, or the therapeutic role of mesenchymal stem cells in neuroprotection and mitochondrial restoration — this collaboration has your name on it. The science is ready. The question is: are you?

Contact: ✉ pandeyaabhishek.crf@santosh.ac.in

Capacity Building & Promotion

Faculty Visit to SATHI Foundation, IIT Delhi – Sonipat Campus

From Facility Walk to a Roadmap

On 7 October 2026, a 12-member delegation from Santosh Deemed to be University — representing Biochemistry, Periodontics, Endodontics, Orthodontics, Paediatric Dentistry, Conservative Dentistry, Prosthodontics, and Biomedical Research — made an academic visit to the SATHI (Sophisticated Analytical Technical Help Institute) at IIT Delhi's Sonipat Campus.

The delegation was warmly received by Dr. Sachin Kadam, Chief Operating Officer, SATHI, alongside a team of instrumentation scientists. Over a full day, the team was guided through 16 high-end instruments, including the Zeiss Confocal Cell Discoverer, Cryo-Transmission Electron Microscope, STED Super-Resolution Microscope, Lightsheet Microscope, Field-Emission SEM, High-Resolution Mass Spectrometer (HRMS), Electron Paramagnetic Resonance (EPR), and a CNC-Integrated Metal 3D Printer, among others. Discussions covered user charges, sample preparation, slot booking via the SATHI portal, and the 1-free-slot incentive for publications acknowledging IIT Delhi.

The visit opened doors to joint grant proposals, faculty-student internships, and collaborative research publications under the existing MoU between SDU and SATHI Foundation, IIT Delhi.





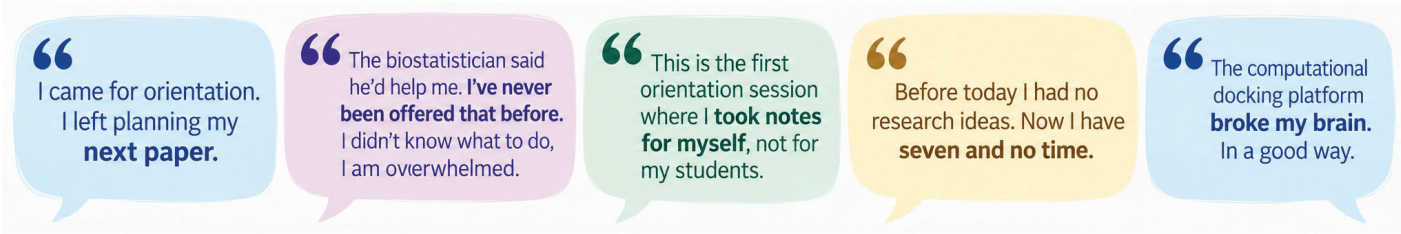
Research Facility Visit

Curiosity Brought 41 In. Discovery Sent Them Out Inspired.

On 30 September 2026, the 45-minute CRF visit under SDU's Faculty Induction Programme was equal parts tour, revelation, and recruitment drive. Flow cytometers, qRT-PCR platforms, a -80°C cold room, cell culture suites, computational docking systems — the kind of infrastructure that usually lives in grant proposal wish-lists was right here, on campus.

Six faculty flagged formal interests before the session even ended. That is not orientation. That is ignition.





45 minutes. 41 faculty. A facility that was always here — just waiting to be found.

Mentoring Excellence Program for Doctoral Guides

LEVELING UP: Because Great Researchers Aren't Born... They're Trained!

Santosh Deemed to be University organised the 2nd FDP for Ph.D. Supervisors on 23 October 2026, themed "Mentoring Excellence." Dr. V. N. Mahalakshmi, Hon'ble Vice Chancellor, delivered the introductory address on the 360-degree competency framework. Dr. Akshay Bhargava, Director, Research, spoke on "Pushing Boundaries in Research," and Dr. Jyoti Batra, Dean, Research, addressed UGC compliance under "Compliance Compass.". Further, Hon'ble Vice Chancellor, delivered a talk on the Scientific conduct and authorship ethics and facilitate the mini case studies as an interactive session.

The keynote expert lecture, "Mentorship Mastery: Research That Stands the Test of Time," was delivered by Dr. Ved Prakash Mishra, Chief Advisor to the Founder Chancellor and Chairman, National Expert Panel, NMC. He emphasised systematic thesis evaluation through structured checkpoints, ensuring originality, methodological rigour, and scientific quality. He strongly recommended periodic supervisor-scholar interactions, research workflow (ray) diagrams, and individual progress charts to monitor milestones and scholars' academic growth. He underscored research integrity, data authenticity, prevention of plagiarism and falsification, sound statistical interpretation, and the ethical principles of beneficence, non-maleficence, autonomy, and justice.









Clinical Connect

Capacity Building for Advancing Clinical Research and Interdepartmental Collaboration



The open session was attended by HODs of all Clinical, Pre- and Para-Clinical departments of Santosh Medical College and Hospital. Dr. Chauhan delivered a keynote on translational research. Clinical departments then presented research ideas using a common template covering the question, novelty, scope for collaboration, timelines and pilot data.

- **Key Issues Discussed:** The meetings across various clinical and medical departments highlighted a general lack of faculty motivation, heavy workloads and overburdened staff, challenges in formulating clear research questions (RQ), multiple rejected ICMR project applications, and difficulties in converting research into high-impact publications. Specific departmental gaps included small sample sizes, funding and cost constraints, and translational research bottlenecks.
- **Solutions Offered:** Proposed strategies included improving faculty motivation, providing structured biostatistical support, utilizing regional registries and community health screening programs, conducting systematic literature reviews before initiating studies, and structuring research into one-page write-ups to articulate priorities and transition lower-quartile research to higher tiers.
- **Key Takeaways:** Strengthening institutional research output requires overcoming faculty disinterest through structured guidance, mentorship, and incentives. Emphasizing high-value areas—such as infectious disease tracking, lifestyle and metabolic genomics, low-cost diagnostics, and rigorous clinical interventions—will help bridge the gap between preliminary findings and successful high-impact publications.

Dr. Chauhan launched the 'Living Lab Model', an interdisciplinary research collaboration portal. The session closed with a vote of thanks by the Dean Research.

Publication Portal Training

Your Publications Were Always Yours. Now the Portal Knows That Too.

Two sessions. 26 faculty. One very patient biostatistician.





On 13th and 21th October 2026, the CRF brought its Research Publication Portal Training to Santosh Dental College — and quietly solved a problem most faculty didn't know had a solution.

Dr. Jatin, CRF Biostatistician, walked 26 faculty members through a portal that talks directly to PubMed, Scopus, Embase and OpenAlex. Publications retrieved automatically. Journal rankings verified in real time. Records that actually stay updated.

"I've been maintaining an Excel sheet of my publications since 2011. This session was an intervention."
"It pulls from PubMed automatically? I've been doing this by hand for eight years."
"I didn't know my h-index was trackable here. I do now. It's higher than I thought."

Two afternoons. A portal most people didn't know existed. Now they do — and their publication records will never look the same.

The research was always happening. Now the system can finally see it.

Research Ethics

Expectancy Biases: Mindset vs. Measurement

Prof.(Dr.) V.N. Mahalakshmi
Vice Chancellor, Santosh Deemed to be University

Expectancy biases happen when what a researcher hopes to see skews the reality of what actually happens.

They come in two main forms: **Confirmation Bias** (a biased mindset that selectively notices only supportive clues) and **Observer Bias** (a biased measurement that misgrades results or subtly coaches' participants). While closely related, **Confirmation Bias** and **Observer Bias (Experimenter Expectancy Effect)** are distinct cognitive phenomena.

Confirmation Bias (The Mindset Version): How expectations distort how data is **interpreted.** The researcher's mind acts like a selective filter, unconsciously spotlighting evidence that proves them right while ignoring clues that prove them wrong.

Observer Bias (The Measurement Version): How expectations distort how data is **collected.** The researcher's behavior acts like a warped measuring tape, unintentionally altering how clinical signs are scored or coaxing the patient to respond favourably.

Confirmation bias is an internal psychological tendency that influences how information is interpreted or remembered, whereas observer bias is an active measurement error where a researcher's expectations distort data collection or patient behavior.

Confirmation Bias is reading a student's essay and grading it an "A" because you already think they are brilliant, effortlessly skimming past their glaring typos.

Observer Bias is timing that student's race with a handheld stopwatch and accidentally stopping the timer half a second early because you expected them to cross the line first.

Clinical Example: **Confirmation Bias**
A physician believes that a middle-aged patient with chest discomfort simply has acid reflux due to stress and poor diet.

- **The Error:** The doctor focuses heavily on the patient mentioning spicy food the night before, while glossing over the patient's remark that the pain radiates down their left arm during exertion.
- **Why it fits:** The physician selectively emphasizes details that fit their pre-formed idea ("it's heartburn") and ignores contradictory clinical evidence ("it could be angina").

Clinical Example: **Observer Bias / Experimenter Expectancy Effect**
A clinician is conducting a trial on a new topical ointment for severe eczema and knows which patients are receiving the active drug versus a placebo.

- **The Error:** When examining a patient on the active drug, the clinician scrutinizes the rash with a strong expectation that it is healing. They record a borderline, faint patch of redness as "completely resolved" rather than "mild erythema." Furthermore, they might ask leading questions during the visit ("You feel much less itchy today, don't you?"), subtly leading the patient to rate their symptoms more favourably.
- **Why it fits:** The researcher's knowledge and expectations directly altered how the outcome was observed, measured, and recorded in the trial data.

Feature	Confirmation Bias	Observer Bias / Experimenter Expectancy
Core Distinction	**Internal interpretation:** How a researcher views, selects, or rationalizes data they already have.	**External influence:** How an examiner's expectations distort real-time measurement, administration, or subject behavior.
Where it occurs	Literature reviews, hypothesis testing, diagnostic reasoning, and discussion sections.	Data collection, physical examinations, subjective rating scales, and clinical interviews.
Participant role	Passive; it happens inside the researcher's mind.	Active or reactive; the examiner may subtly coax responses or prime the subject.
Primary mitigation	Protocol pre-registration, blind analysis, rival hypothesis testing.	Masking/blinding (single or double blind), standardized measurement tools, independent evaluators.

Impact on Science and Patient Care

These distortions directly undermine scientific validity. When study conclusions rest on handpicked evidence or skewed measurements, the reported findings become impossible to reproduce. In healthcare, the cost is severe: ineffective therapies are declared miraculous, while dangerous adverse side effects are swept under the rug as unrelated anomalies. Ultimately, **patient safety is compromised by false clinical confidence**, while scientific advancement stalls as future studies chase phantom breakthroughs built on distorted baselines.

Mitigation in Study Design

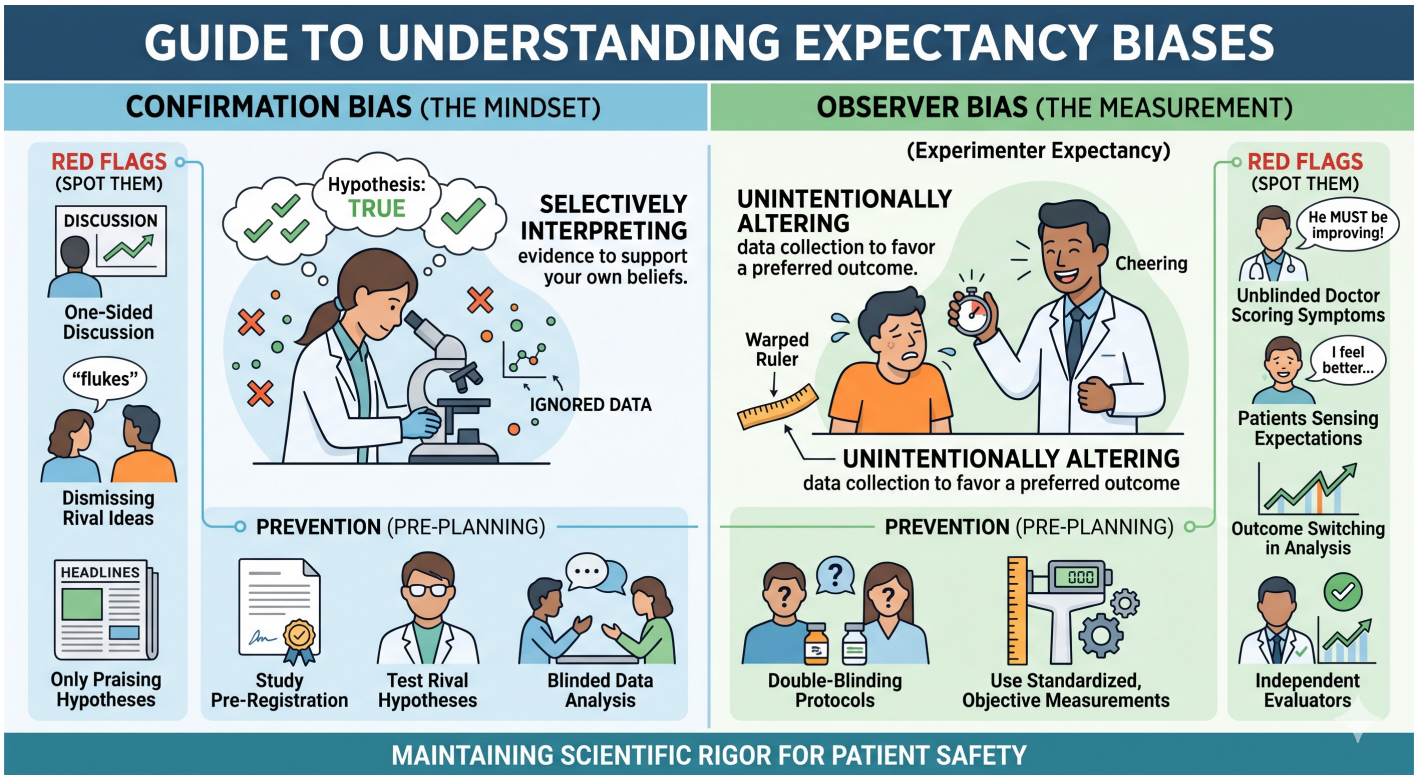
Preventing these biases requires designing the researcher's expectations out of the experiment from day one:

- **Double-Blinding:** Keep both the treating clinicians and the patients unaware of who receives the experimental treatment versus a placebo.
- **Standardized Endpoints:** Use objective, hard criteria (such as digital imaging or lab values) instead of subjective symptom scoring.
- **Pre-Registered Analysis Plans:** Lock in hypotheses, sample sizes, and statistical steps in public registries before collecting data, making it impossible to cherry-pick favorite findings later.
- **Independent Evaluators:** Ensure the team analyzing trial data has no personal stake or involvement in patient treatment.

Spotting Them in Published Papers

When reviewing published studies, watch for key red flags:

- **Unblinded Subjective Outcomes:** Trials where unblinded researchers scored soft symptoms like "pain relief" or "skin improvement."
- **Missing Counter-Evidence:** Discussion sections that only praise the hypothesis and dismiss negative data as "flukes."
- **Vague Outcome Switching:** Papers highlighting outcomes that were not listed as primary goals in the initial trial protocol.



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Research Collaboration Hub

Onboarding onto UNESCO's Remote-Access Science Infrastructure Platform

Santosh Deemed to be University (SDU), Ghaziabad, has achieved a significant milestone in strengthening its global research engagement by being officially listed on UNESCO's Remote-Access Science Infrastructure Platform as both a **Service Provider and a Receiving Partner.**

This recognition integrates SDU's research ecosystem into an international scientific network, opening new avenues for cross-border research collaborations, shared instrumentation, co-authored publications and international grant acquisition.

The platform opens five key strategic avenues for our academic community:

- **Remote Equipment Hosting (Provider Role):** External international laboratories can remotely access and run experiments utilizing DBMR's analytical and computational suites.
- **Access to Advanced Global Instrumentation (Receiver Role):** Faculty and research scholars can now access high-end, off-campus instrumentation that is currently unavailable on-site including **Confocal Microscopy, X-ray Crystallography, and Scanning Electron Microscopy (Sem).**
- **Sample Processing & Multi-Centric Trial Partnerships:** The SDU Departments can offer essential pipeline services-including mammalian cell culture, DNA/RNA isolation, RT-PCR, Western blotting, and quantitative protein assays-establishing a formal basis for funded joint ventures and external service revenue.
- **In Silico & Computational Biology Consortia:** Research teams can collaborate on high-throughput bioinformatics, structural biology, and statistical modeling. This setup directly supports projects in targeted drug delivery systems, protein-ligand interaction modeling, and computational genomics.
- **Global Visibility, Capacity Building, and Grant Competitiveness:** This listing spotlights SDU's core strengths across the international research community. Participating labs will have opportunities to host joint training webinars, recruit international co-investigators, and co-develop competitive bilateral research grants.



Research Collaboration Hub

From Bedside to Community: Take Your Clinical Research to the Field

Prof. (Dr.) Syed Hasan Nawaz Zaidi,
Professor & HOD
Department of Community Medicine, SMCH

Great Questions Often Begin in the Clinic. Their Answers Often Lie in the Community.

Great medical questions often start right in the clinic, but their actual answers usually live out in the community. Most clinical research focuses strictly on patients who make it to the OPD, the ward, or the emergency room. However, hospital-based samples only show a fraction of a disease's true burden, often skewing data through Berkson's bias and missing undiagnosed cases, dropouts, and hard-to-reach populations. Community-based research bridges this exact gap, and our department is ready to help you utilize our established field infrastructure for your next project. The ICMR highlights that managing chronic disease epidemics is impossible without active community-based implementation research.

Collaborative Research in Action (a few examples)

We support both descriptive studies (exploring the distribution and determinants of a health problem) and implementation research (evaluating how to deliver proven treatments to the people who need them most). These projects naturally align with national priorities such as NCDs, tuberculosis, maternal and child health, nutrition, mental health, and vector-borne diseases. This will also include health system-based interventions to increase access, and to successfully implement national health programme or schemes, reducing inequity and improve quality of health care.

General Medicine:

Research question: What is the prevalence of undiagnosed hypertension, and which modifiable risk factors are associated with it, among rural adults?
Proposed title: Community-Based Screening and Clinical Profiling of Hypertension in Rural Blocks of Western Uttar Pradesh.
How the two departments work together: Community Medicine teams, working through the RHTC NCD clinic and FAP villages, screen adult's door-to-door for blood pressure and blood sugar, and map lifestyle risk factors. General Medicine receives the screen-positive participants for clinical evaluation, complication assessment and treatment protocols. The biostatistician sets the sample size and the analysis plan. The result is a true population-based estimate with clinical depth, and a natural springboard for a follow-up trial of lifestyle modification delivered by field workers.

Paediatrics:

Research question: To what extent do household dietary diversity and socioeconomic status correlate with moderate acute malnutrition in children under five?
Proposed title: Nutritional Status Assessment and Clinical Correlates of Under-Five Malnutrition in Peri-Urban Settlements.
How the two departments work together: Through the UHTC, Anganwadi networks and immunization tracking units, Community Medicine staff reach households, record dietary patterns, sanitation and socioeconomic status, and trace children who have dropped out of follow-up. Paediatrics provides clinical assessment, growth monitoring, micronutrient supplementation and morbidity tracking. Together, the study links what happens in the kitchen with what is found in the clinic.

Other Doors Are Open Too

Other clinical specialties—including Obstetrics & Gynaecology for high-risk pregnancies, Pulmonary Medicine for active TB case-finding, Psychiatry for community-level depression and substance use, Orthopaedics for elderly fall tracking, and Dermatology for residential scabies outbreaks—already have ready-to-develop frameworks waiting. We strongly encourage co-supervised postgraduate thesis so that clinical insight and epidemiological rigour merge into a single, cohesive protocol.

In Short: What Can We, as Community Medicine Department, Offer for Your Research

- **Access to Defined Catchment Populations and Longitudinal Cohorts:** Our Rural Health Training Centre (RHTC) in Asalatnagar, Muradnagar, covers roughly 65,000 to 70,000 residents across villages like Morta, Duhai, Kanoja, and Abupur. Meanwhile, our Urban Health Training Centre (UHTC) in Pratap Vihar serves between 25,000 and 30,000 people.

We also provide longitudinal household cohorts through our Family Adoption Programme (FAP).

- **Multidisciplinary Field Staff and Execution Support and Dedicated Field Execution:** We take the logistical weight off your shoulders. Our team of Medical Officers, Lady Medical Officers, Medical Social Workers, Public Health Nurses, Health Inspectors, and Health Educators handle door-to-door surveys, patient tracing, health camps, and community rapport-building.

- **Active Outreach Platforms:** You can tap into regular health camps, school screenings, and existing linkages with national programs like NP-NCD, NTEP, and IDSP. We also maintain active MOUs with local institutional settings such as Gharonda Specialized Adoption Agency (Orphanage), Awasiye VridhAshram (Old Age Home), and Navjeevan Kusht Ashram (Leprosy Center) for specialized geriatric, paediatric, or dermatological studies.

- **Advanced Biostatistical and Epidemiological Backing:** We provide hands-on help from the ground up, ranging from sample size calculations and tool validation all the way to complex multivariate analyses.

- **Logistics and Field Transport:** University vehicles, including buses and SUVs, are available to safely transport your team and portable equipment—like sphygmomanometers, glucometers, portable ECG machine, anthropometric kits, etc. — directly to the field.



First Row (L-R): Ms.Monika Bhardwaj (MSW-RHTC), Ms. Priyanka Sharma (Com.Op.), Ms.Arjan Stella (PHN-RHTC), Mr. Wasaf Ali (PHN-UHTC), Mr. Naresh Kumar Saini (MSW-UHTC)

Second Row (L-R): Dr. Gajendra Kumar Gupta (Prof.), Dr. Deepika Agrawal (Prof.), Dr. Syed Hasan Nawaz Zaidi (Prof. & HOD)

Third Row (L-R): Dr. Neha Jetli (Asst. Prof.), Dr. Deepanshi Saxena (Asst. Prof.), Dr. Rahul Kumar (Asst. Prof.), Alanah Syiemlieh (SR), Dr. Amod Kumar (Biostatistician).

Fourth Row(L-R): Dr. Shimail(PG-2), Dr. Vikash(PG-1), Dr. Shashank (PG-2), Dr. Abhimanyu (PG-2), Dr. Raxa (PG-2), Dr. Roshna (PG-2)

Mentor Spotlight

A short conversation with Dr. Jyoti Batra

Could you take us through your journey at Santosh?

Dr. Batra. I'm a biochemist, and for a good part of my career at Santosh I've also served as Dean, Research. On most days my work moves between the laboratory, our research office, and conversations with students and clinical faculty. I don't think of these as three separate roles. They are different ways of asking one honest question: what is actually going on inside the patient?

What's your philosophy?

Dr. Batra. I keep coming back to a simple idea: no clinical sign is really alone. There is a mechanism behind it, and if we look carefully enough, we can almost always name the chemistry. When a cardiologist and a periodontist can talk about the same inflammatory marker, they begin to see each other as colleagues on the same problem rather than people from different specialties. Helping a young scholar/PG make that shift is the quietest and the most useful part of my job.

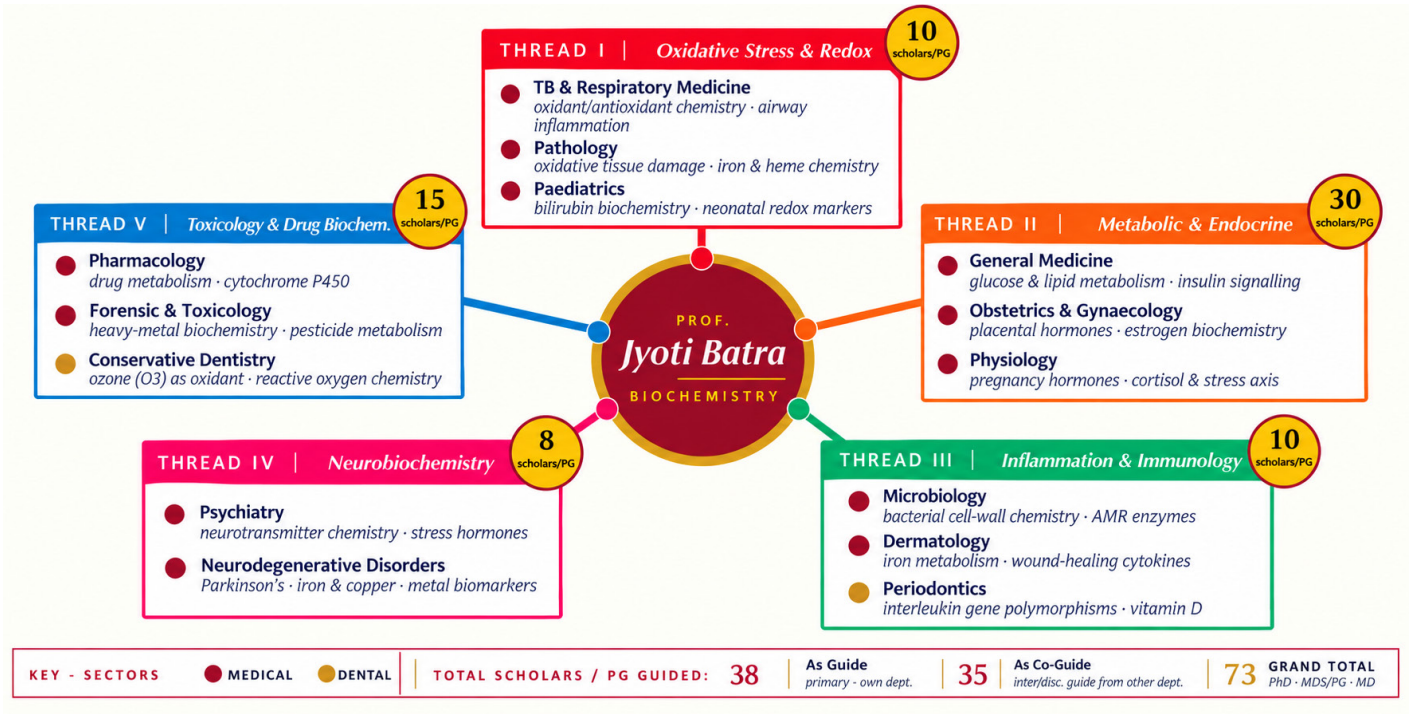
How do you encourage diversity in interdisciplinary research?

Dr. Batra. When I take on a PhD or PG scholar, I usually ask a colleague from another department to co-guide the work — someone who sees those patients clinically. So far there have been 73 scholars/PGs this way: 38 I guided directly from Biochemistry, and 35 where I was the co-guide for a thesis anchored in another department, including Physiology, Pharmacology, Oncology, OBGY, Nephrology, Pulmonary Medicine, Psychology and Oral Surgery. The Faculty Development Programme at DBMR gives us a regular place to meet, teach each other our vocabularies, and shape the next proposal together.



> If there is a mechanism inside your question, there is probably a thread on the previous page already running near it — and someone at the other end who would welcome a conversation.

Dr. Jyoti Batra
Dean Research & Professor of Biochemistry
Santosh Deemed to be University



Honours & Laurels

Institution's Innovation Council (IIC) Rating 2024-25

A Proud Moment for Santosh!

Santosh Deemed to be University has achieved a **3.5-Star Rating in the Institution's Innovation Council (IIC) Rating 2025,** marking a significant milestone in its continued commitment to fostering innovation, entrepreneurship, research, and creativity across the university ecosystem.

This recognition reflects the dedication and collective efforts of the university in nurturing an environment where innovative thinking, research-driven initiatives and entrepreneurial aspirations are encouraged and supported. Through its focus on promoting innovation and creativity, the university continues to strengthen a culture that inspires students and faculty members to explore new ideas, develop solutions and pursue meaningful research. By fostering opportunities for innovation and research, Santosh Deemed to be University aims to empower its academic community to translate ideas into impactful outcomes and contribute meaningfully to society.

The 3.5-star rating serves as an encouragement to build upon these efforts and further strengthen the university's innovation ecosystem. It reinforces the institution's commitment to creating an academic environment that values curiosity, collaboration, experimentation, and continuous improvement.



As Santosh Deemed to be University moves forward, it remains focused on advancing innovation-led learning, strengthening research initiatives, and nurturing the next generation of creative thinkers and future entrepreneurs.