An Official Newsletter of
BALAJI
HERALD

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An Official Newsletter of
**Sree Balaji Medical College and Hospital**
Chrompet, Chennai,Tamil Nadu, India


# BALAJI HERALD

(A News letter of)

**Sree Balaji Medical College and Hospital**

Chrompet, Chennai, Tamil Nadu, India

Vol 13 | February - 2026 | Issue No. 2




CONTENT

## MESSAGE FROM THE EDITOR

Dear Readers,

I am delighted to present the second edition of the SBMCH Herald for this year—a testament to our institution's continued commitment to academic excellence, professional development, and a vibrant community spirit. We warmly welcome our newly joined residents, faculty, and staff, whose presence further strengthens our academic environment.

Our institution continues to serve as a dynamic hub of intellectual and professional growth, hosting a wide range of conferences, workshops, and Continuing Medical Education (CME) programs. These initiatives have created valuable opportunities for knowledge sharing, interdisciplinary collaboration, and staying updated with the latest advancements in healthcare and research.

We are also proud to highlight the increasing number of research publications and patents contributed by our faculty, reflecting their dedication to innovation and scholarly excellence.

More than just a record of events, this newsletter embodies our collective passion for learning, discovery, and progress. As you explore these pages, we hope you experience the enthusiasm, commitment, and unity that continue to propel our institution forward.

*Editorial Committee*

## PAEDHAEMATOCON-2026

Department of Paediatrics and MEU were conducted National conference-on Paedhaematocon-2026 on the 10th February 2026. Speakers were: Dr. Dhaarani. J, Senior Consultant, Rela Hematology and Oncology Centre for Kids (RHOCK) Dr. Rela Institute and Medical Centre, Dr. Anurekha M, Consultant Hematopathologist, Department of Hematology, Dr. Rela Institute and Medical Centre, Dr. Julius Xavier Scott, Director Rela Hematology and Oncology Centre for Kids (RHOCK), Dr. Rela Institute and Medical Centre, Dr. Padma Sagarika Karri, DM Pediatric Oncology (AIIMS), ESIC Medical College, Hyderabad, Dr. Ranjit Kumar C. S, Head, Department of Hematology, Sindhu Hospitals, Hyderabad, Dr. P. Subhashni, Professor of pathology, The programme was attended by 418 delegates. The programme was awarded 2 credit points by the Tamil Nadu Medical Council.

Evaluation of a bleeding child –practical approach (Case-based discussions) by Dr. Dhaarani. J, Utility of CBC/PS in Paediatric office practice by Dr. Anurekha M, Childhood Cancer – When to suspect by Dr. Julius Xavier Scott, Clinical approach to a child with Anemia by Dr. Padma Sagarika Karri, Hematopoietic stem cell transplantation in children –When/Whom to Refer by Dr. Ranjit Kumar C. S, Blood Component Therapy by Dr. P.Subhashni.

**A1C Con 2026**

Department of Biochemistry and MEU were conducted National conference-on A1C Con 2026 HBA1C & Beyond Redefining Diabetes Care on the 12th & 13th February 2026. Speakers were: "Dr. B. Jyothirmayi, Prof & Head, Dept of Biochemistry, Madha Medical College & Research Institute (MMCRI), Dr. Pradeep Selvaraj, Center Head & Sr. Consultant Diabetologist, Chettinad Multi specialty Hospital, Karapakkam, Dr. A. Mary Chandrika, Associate Professor, Dept of Biochemistry, SBMCH, Dr. R. Harini, Consultant Biochemist & QM Cancer Institute Adyar (CIWIA). Markers beyond Hba1c by Dr. B. Jyothirmayi, Hba1c Graphical Interperation by Dr. R.Harini, continuous glucose Monitoring (CGMS) by Dr. Pradeep Selvaraj, POCT – Glucometer by Dr. A. Mary Chandrika.

WORKSHOP HbA1c by HPLC: Theory to Practice – Virtual Lab Tour R&D Facility Agappe Cochin Speaker & Coordinator by Dr.P.Radhalakshmi.

## INTERNATIONAL CONFERENCE I-ANATOMY

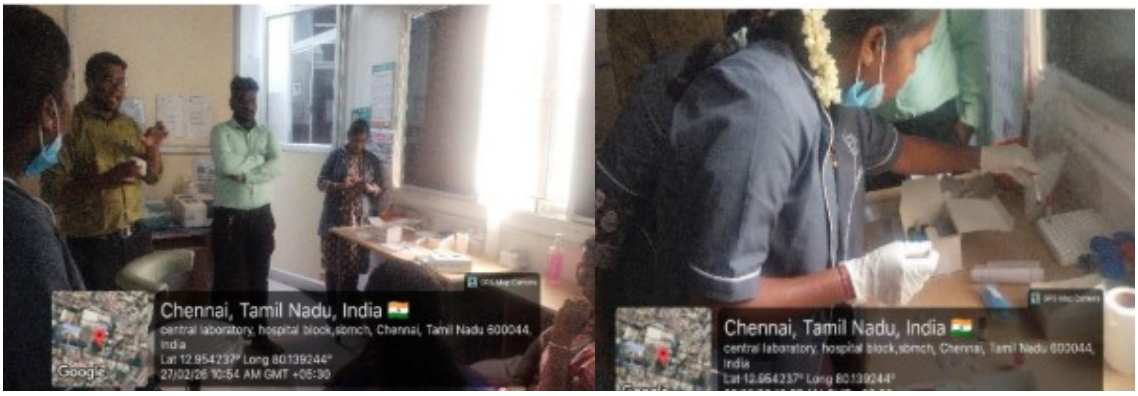
Department of Anatomy and MEU were conducted International conference-on I-Anatomy Immersive Anatomy: Integrating Virtual Dissection Tables and 3D Technologies in Medical Education on 20th & 21st February 2026. The conference were explored the transformative role of virtual dissection tables and 3D technologies in modern anatomy education. The conference aimed to bridge traditional dissection with immersive digital tools, enhancing spatial understanding, clinical correlation, and learner engagement in undergraduate and postgraduate medical training. International Speakers; Dr. Vintha Ravi Kishore, Dean, St. Martinus University Faculty of Medicine, Curacao, Dr. Prof. Giuseppe Sciamanna Docente universitario UniCamillus International Medical University Rome, Italy. Prof. Dr. Manoj Humagain, Dean, Kathmandu University, School of Medical Science, Nepal. National

Speakers; Dr. Sarah.R, Additional Professor & HOD of Anatomy, AIIMS, Madurai, Dr. Deepa Bhat, Professor & HOD of Anatomy, J.S.S. Medical College, Mysore, Karnataka. Day 1 Session 1: Virtual Dissection Tables - Global Perspectives by Dr. Vintha Ravi Kishore, Dean, St. Martinus University Faculty of Medicine, Curacao, Session 2: "3DVirtual Dissection Table - CADAVIZ" by Dr. Sam Nishanth, Medical Head of ImmersiveVision Technology. Session 3: Utility of Virtual Dissection Across Clinical Depar tment by Dr. Prof. Giuseppe Sciamanna, Docente universitario (University Lecturer) UniCamillus International Medical University Rome, Italy, Session 4: Future of Anatomy Education in the Digital Era by Prof. Dr. Manoj Humagain, Dean, Kathmandu University School of Medical Science, Nepal Day -2 Session 1:Enhancing Anatomy Learning Through Virtual Dissection Tables: Strengths and Challenges by Dr. Sarah.R, Additional Professor & HOD of Anatomy, AIIMS, Madurai, Session 2: 3D Anatomy in Embryology by Dr. Deepa Bhat, Professor & HOD of Anatomy, J.S.S. Medical College, Mysore, Karnataka, Panel Discussion: Evolving Approaches in Cadaveric and Digital Dissections- Moderator Dr. Krishnaveni Sharath

Professor of Anatomy, SBMCH, Chennai, Panelist Dr. Arathi M.S, Professor of Anatomy, Chettinad Hospital and Research Institute, Kelambakkam, Chennai, Dr. Mahesh K.G, Senior Resident, General Surgery, SBMCH, Chennai, Hand on Workshop- Demonstration of Virtual dissection table and 3D Platforms


## NEWER TECHNIQUE IN DIAGNOSIS OF HCV & RPR ANTIBODIES

The Department of Microbiology and Medical Education Unit Conducted workshop on Newer Technique in Diagnosis of HCV & RPR Antibodies" on 27.02.2026. The Speakers for the workshop was R.P Muthu Krishnan, Sales & Application, Tulip diagnostic Pvt Ltd, who spoke on demonstrated ELISA technique of HCV & Qualitative to diagnosis of RPR Antibodies. This Session was followed by a Hands on training to our technicians. The Staff who attended the workshop was benefitted by the Session.




## GUEST LECTURE


The Department of General Surgery and Medical Education Unit Conducted a Guest Lecture on Bird's Eye View On Organ Transplat" on 27.02.2026. Guest; Dr.Kanthimathy M.D.D.A Former Prof. of Mandhurar Medical College.

## STEPP -2026

The Structured Teaching Enhancement Program for Postgraduates (STEPP) was conducted on 26th and 27th February 2026, providing a dynamic platform for postgraduate students to enhance their teaching competencies in line with evolving trends in medical education. Organized by the Medical Education Unit & Curriculum Committee, the program was aligned with the principles of Competency-Based Medical Education (CBME) as recommended by the National Medical Commission (NMC). It aimed to equip postgraduate students with essential skills to become effective, learner-centered educators.

The program began on Day 1 (26th February 2026) with an engaging introduction to CBME, emphasizing outcome-based learning and its relevance in modern medical training. Sessions on adult learning principles and group dynamics helped participants understand how learners engage and interact in educational settings. A key highlight of the day was the session on innovative large group and small group teaching techniques, which provided practical strategies to enhance student engagement and participation. The day also included a hands-on workshop on deriving specific learning objectives from competencies, enabling participants to translate curriculum requirements into clear, measurable outcomes aligned with CBME.

On Day 2 (27th February 2026), the focus shifted to applied teaching practices and clinical education. A dedicated session on teaching clinical and practical skills introduced structured

approaches to bedside teaching, demonstration, and skill-based learning. The day further covered important components of the medical curriculum, including AETCOM (Attitude, Ethics, and Communication), Self-Directed Learning (SDL), and the Student-Doctor method of clinical training, emphasizing the importance of holistic and student-centered education. Participants were also trained in writing structured lesson plans and in aligning learning objectives with appropriate Teaching-Learning Methods (TLM) and assessment strategies, ensuring a cohesive and outcome-driven teaching approach as per.

NMC guidelines.

The sessions were highly interactive, fostering discussion, reflection, and active participation. A total of 51 postgraduate students attended the program, guided by experienced faculty members and resource persons, creating a collaborative and enriching learning environment.

The program had a significant impact on participants by strengthening their understanding of CBME, enhancing their teaching and communication skills, and promoting structured and competency-driven education. It also encouraged the adoption of innovative teaching techniques and improved confidence in delivering clinical and academic sessions.

In conclusion, STEPP 2026 was a successful and impactful initiative that contributed to the professional development of postgraduate students as future medical educators. The program highlighted the importance of integrating modern educational strategies with clinical training to achieve excellence in medical education.

STEPP 2026 stands as a meaningful step towards nurturing competent, confident, and compassionate educators for the future.

## SEMINARS

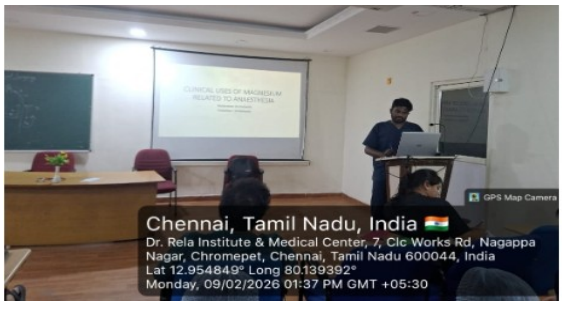
Department of Pathology Conducted a Seminar on Necrotizing Granulomatous Inflammation on 02-02-2026 Presented by Dr. Thillaikkarasi

Department of Physiology Conducted a Seminar on Neurotransmitters & Neuromodulators on 04-02-2026 Presented by Dr. S. Chitra

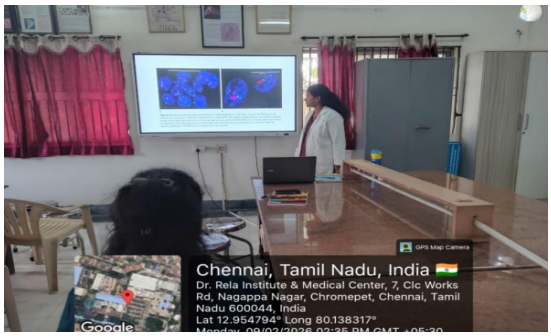

Department of Orthopaedics Conducted Seminar on Evaluation of skeletal metastasis on 04-02-2026 Presented by Dr. Ambrish V S


Department of Anaesthesiology Conducted Seminar on Pharmacology of non depolarizing neuromuscular blockers on 09-02-2026 Presented by Dr. Megha


Department of Anaesthesiology Conducted a Seminar on Clinical uses of magnesium related to anaesthesia on 09-02-2026 Presented by Dr Rishanth K P




Department of Pathology Conducted a Seminar on Fish And Its Applications on 09-02-2026 Presented by Dr. Renupriya



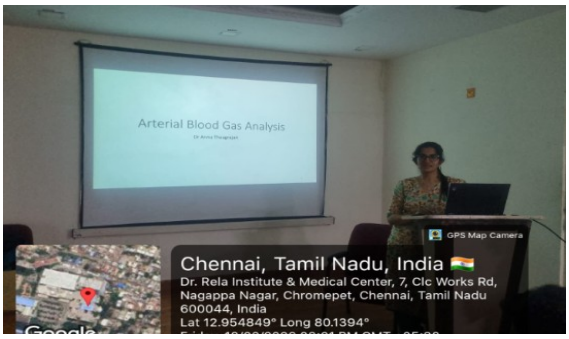
Department of Microbiology Conducted Seminar on Culture Media and Culture Methods on 10-02-2026 Presented by Dr. Sowmya Dr, Agalya

Department of Pharmacology Conducted Seminar on Clinical pharmacology and recent updates of peripherally acting skeletal muscle relaxants on 10-02-2026 Presented by Dr. M. Mathangi

Department of Physiology Conducted Seminar on Amino acids and Proteins on 11-02-2026 Presented by Dr. Jaseela Mohamed Yoosuf.


Department of Pathology Conducted Seminar on Who Classifications of Tumors of Head & Neck (PART-II) on 12-02-2026 Presented by Dr. Salsabiel Nijamudeen


partment of Anaesthesiology Conducted Seminar on Arterial Blood Gas Analysis on 13-02-2026 Presented by Dr.Annu




Department of Psychiatry Conducted Seminar on Recent advance in diagnosis and management of AD on 16-02-2026 Presented by Dr. Deepan Raj


Department of Anaesthesiology Conducted

Seminar on Succinylcholine on 16-02-2026 Presented by Dr. Dennis


Department of Community Medicine Conducted Seminar on Nutritional surveillance on 16-02-2026 Presented by Dr. Bhuvanesh Aravindh

Department of Ophthalmology Conducted Seminar on Corneal Topography in Keratoconus on 17-02-2026 Presented by Dr. Kavya


Department of General Medicine Conducted Seminar on Image of the week - Bronchoalveolar haemorrhage on19-02-2026 Presented by Dr.Paliwal shivani shyam sunder

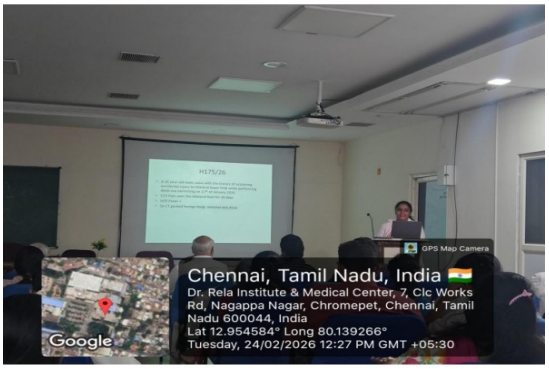
Department of Physiology Conducted Seminar on Nerve Muscle Physiology and Cardiovascular Physiology on 21-02-2026 Presented by UG STUDENTS (2025-26)



Department of General Medicine Conducted Seminar on Image of The Week - Marfans Syndrome on 23-02-2026 Presented by Dr. Shantanu Shivaji Goundkar

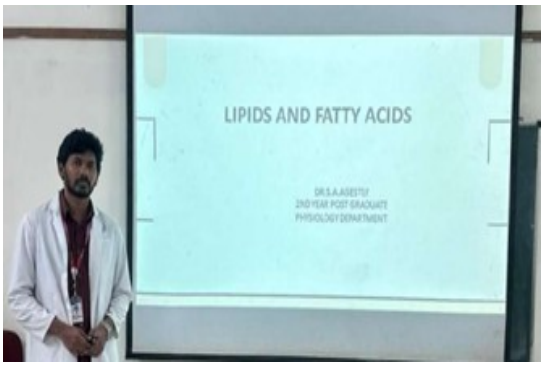
Department of Pathology Conducted Seminar on Megaloblastic Anemia on 23-02-2026 Presented by Dr. Xavier Ryon Washington


Department of Pathology Conducted Seminar on Abscess With Foreign Body on 24-02-2026 Presented by Dr. Archana R




Department of Orthopaedics Conducted Seminar on SCIWORA on 25-02-2026 Presented by Dr. Shantanu Kumar

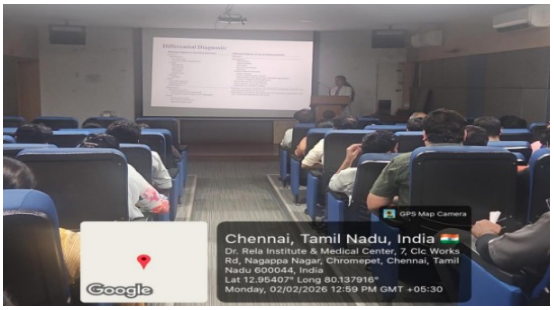

Department of Physiology Conducted Seminar on Fatty acids and lipids on 26-02-2026 Presented by Dr. S. A. Agestly




Department of Physiology Conducted Seminar on Excitable tissue muscle on 27-02-2026 Presented by Dr. N. S. Sridevi

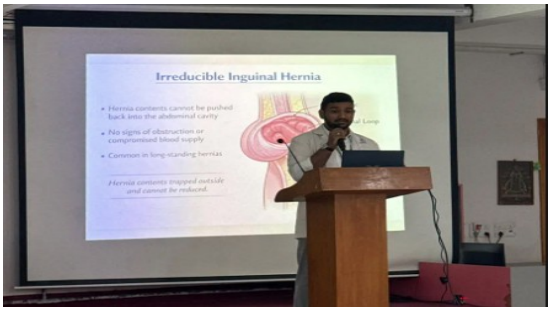
## SYMPOSIUM'S

Department of Pathology Conducted Symposium on Necrotizing Granulomatous Inflammation on 02-02-2026 Presented by Dr.Thillaikkarasi.




Department of Orthopaedics Conducted Symposium on Ortho Path – Tb spine necrotic granulomatus on 02-02-2026 Presented by Dr. Suraj Sunderraj Joseph.


Department of General Surgery Conducted Symposium on UG Symposium - Inguinal Hernia on 07-02-2026 Presented by UG Students.

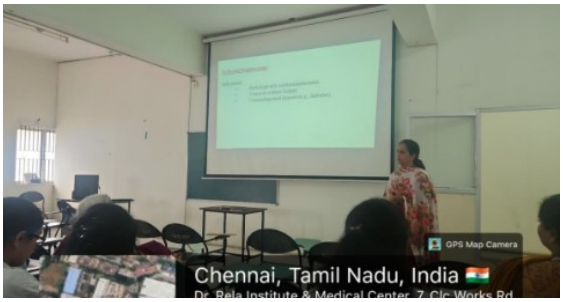



Department of Orthopaedics Conducted Symposium on Complex Regional Pain Syndrome on 09-02-2026 Presented by PG's


Department of Orthopaedics Conducted Symposium on Ortho Radiology – Internal Rearrangement of Knee on 23-02-2026 Presented by Dr. Mahesh S.


Department of DVL Conducted Symposium on "Contact Dermatitis– Pathogenesis of Contact Dermatitis and Patch Testing" & "Contact Dermatitis –Common Allergens in Allergic Contact Dermatitis" on 24-02-2026 Presented by Dr. Santhoshie & Dr. Sowmya.

Department of Pathology Conducted Symposium on Susan & Lester-Gross Discussion-Kidney on 25-02-2026 Presented by Dr. Vaishnavi Venkat.



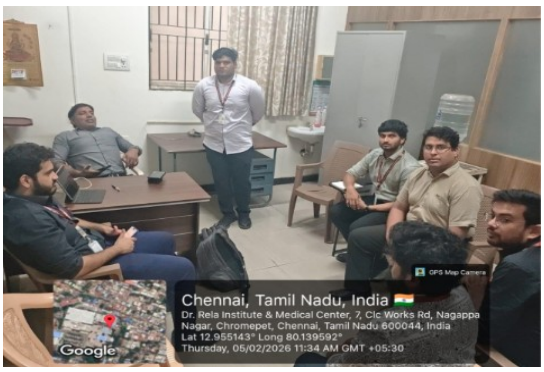

Department of General Surgery Conducted Symposium on PG Symposium - Maxillofacial Injuries on 28-02-2026 Presented by Dr. Kesav, Dr. Suil,.

Department of Obstetrics and Gynaecology Conducted Symposium on Carcinoma Cervix on 26-02-2026 Presented by Dr. Elakkiya, Dr. Vithisha, Dr. Monisha, Dr. Karuvizhi


## CLINICAL DISCUSSION'S

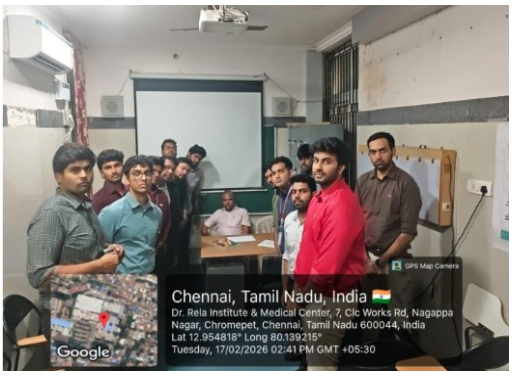
Department of Orthopaedics Conducted Clinical Discussion on Case Presentation - Supracondylar fracture on 03-02-2026 Presented by "Dr. Ashin Khan


Department of Orthopaedics Conducted Clinical Discussion on Case Presentation - Non union Neck of Femur fracture on 05-02-2026 Presented by "Dr. Mahesh

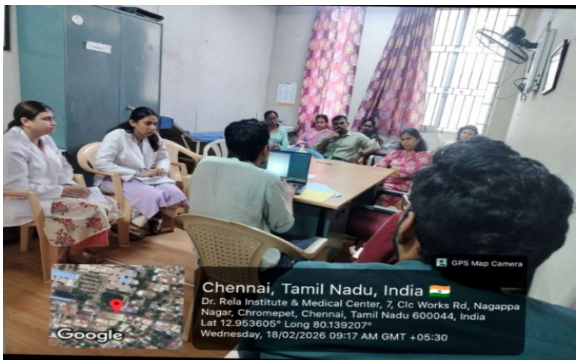


Department of Orthopaedics Conducted Clinical Discussion on Case Presentation - Non Union Humerus on 10-02-2026 Presented by PG's


Department of Orthopaedics Conducted Clinical Discussion on Case Presentation - IVDP on 17-02-2026 Presented by PG's




Department of Psychiatry Conducted Clinical Discussion on Clinical Case Conference on 18-02-2026 Presented by Dr. Amit.




Department of Orthopaedics Conducted Clinical Discussion on Case Presentation - IVDP Spine on 19-02-2026 Presented by "Dr. Ranjith M G

Department of General Surgery Conducted Clinical Discussion on Surgical Society Meeting on 21-02-2026 Presented by Dr. Prabanchn, Dr. Zinniya Zion

Department of Orthopaedics Conducted Clinical Discussion on Case Presentation - Aseptic screw loosening or delayed union on 24-02-2026 Presented by "Dr. Anurag Choudhary, Dr. Ambrish V. S

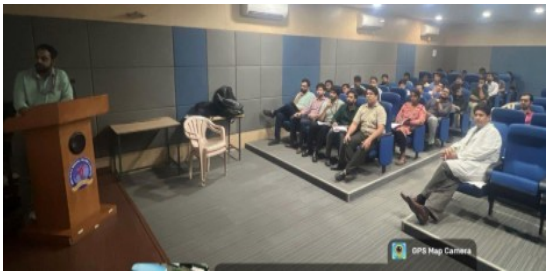
## JOURNAL CLUB

Department of Ophthalmology Conducted Journal Club on Concordance between the new modular slit lamp mounted Goldmann applanation tonometer (GAT), conventional slit lamp mounted GAT, and Perkins tonometer on 06-02-2026 Presented by Dr. Uma Bhagavathy.


Department of Microbiology Conducted Journal Club on “Isolation of Human Metapneumovirus from Clinical Specimen in Human Organoid – Derived Bronchial Cell Culture is Superior to Isolation in Monolayer Cell Line Culture.” on 11-02-2026 Presented by Dr. Nila. N.

Department of Pharmacology Conducted Journal Club on “Randomised Controlled Trial to Compare Safety and Efficacy of Propranolol with Flunarizine in Adult Patients Suffering from Migraine as Prophylactic Drugs" on 12-02-2026 Presented by Dr. Vignesh.V.

Department of Orthopaedics Conducted Journal Club on Comparative Effectiveness of Different Immobilization Techniques in Managing Reduction of Acute Anterior Shoulder Dislocation: A Retrospective Cohort Study on 07-02-2026 Presented by Dr. Muthu Akilan T P.



Department of General Surgery Conducted Journal Club on 11-02-2026 Presented by Dr. Asmita, Dr. Bhavya, Dr. Preetham.

Department of Ophthalmology Conducted Journal Club on “Optical coherent tomography angiography parameters in hydroxychloroquin toxicity" on 13-02-2026 Presented by Dr. Krithiga.


Department of ENT Conducted Journal Club on Epistaxis in anticoagulated patients management challenges on 17-02-2026 Presented by Dr. M.K. Rajasekar, Dr.Vishwanath


Department of Pharmacology Conducted Journal Club on Comparative study on efficacy and safety of high dose itraconazole (300 mg once daily) versus conventional dose of itraconazole (200 mg once daily) in extensive resistant dermatophytosis on 19-02-2026 Presented by Dr. M. Mathangi.


Department of Pathology Conducted Journal Club on A Rationale Approach To Diagnosis of Liver Metastasis on 21-02-2026 Presented by Dr. Hina Aslam

Department of Pathology Conducted Journal Club on Thyroid Cytology Practical Tricks & Pitfalls on 20-02-2026 Presented by Dr. Klinton Sugirthsingh.

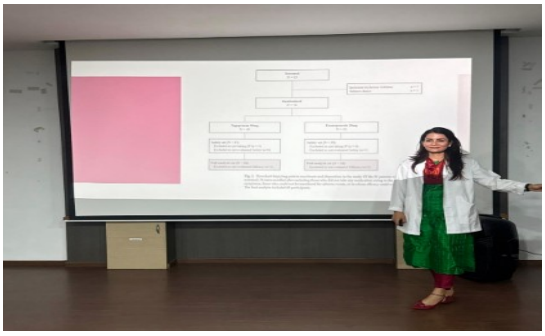

Department of Physiology Conducted Journal Club on “Lipid profile among controlled and uncontrolled among type 2 diabetic patients in a Rural tertiary care: A comparative study” on 21-02-2026 Presented by Dr. Jaseela Mohamed Yoosuf.


Department of General Medicine Conducted Journal Club on Ketone supplementation dose-dependently lowers postprandial blood glucose, lipid and ghrelin levels in individuals with type 2 diabetes: a randomized crossover study on 25-02-2026 Presented by Dr.Rahul.

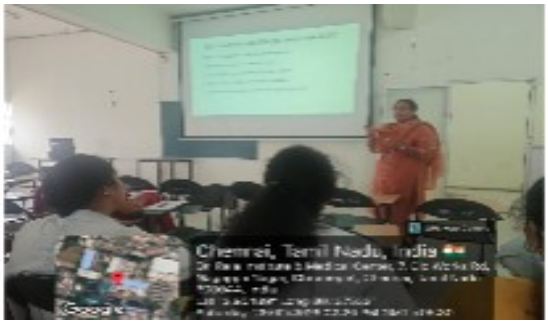
Department of Physiology Conducted Journal Club on The effect of prolonged usage of headsets on hearing efficiency among students at Qassim University” on 28-02-2026 Presented by Dr. N. S. Sridevi.


Department of Community Medicine Conducted Journal Club on “Cohort Study” on 24-02-2026 Presented -Dr R. Neevadetha.


Department of Pharmacology Conducted Journal Club on Assessment of the efficacy of on- demand tegoprazan therapy in gastroesophageal reflux disease through a randomized controlled trial on 26-02-2026 Presented by Dr. Srinidhi Ranganathan.



Department of Pathology Conducted Journal Club on Tumors & Tumor Like Lesions of Gallbladder-A Review on 28-02-2026 Presented by Dr. Kavya S.



## CME

Department of General Medicine Conducted CME on Be The Champion of Your Life on 03-02-2026 delivered by Dr. V. Anuviyan


Department of Paediatrics Conducted CME on "33rd Chennai Paediatric Meet" on 11-02-2026 Presented by Dr. Ponmozhi


Department of ENT Conducted CME on Tinnitus evaluation and treatment on 23-02-2026 delivered by Dr. M. K. Rajasekar


Department of Community Medicine Conducted CME on Blood Donation and Component Therapy: Optimizing Every Drop on 23-02-2026 delivered by Dr. Ashwin Balajee Blood Bank Medical Officer, Hindu Mission Hospital, Thambaram

Department of General Medicine Conduct CME on Obesity Management With Cardiovascular Safety on 27-02-2026 delivered by Dr. Jayashree Gopal, Senior Consultant Endocrinologist And Associate Dean For Teaching And Research. M.V. Diabetes Research Center, Royapuram

Department of DVL Conducted Clinical Pathological Conference on Erythema nodosum & Morphea on 06-03-2026 Presented by Dr. Sowmya

Department of General Medicine Conducted Clinical Society Meeting on 1. A tale of hepatitis masquerading as severe anemia, 2. Sialolithiasis, 3. Early Bleeding, Unexpected Diagnosis: A Prepubertal Puzzle, 4. Comparative Analysis of Functional Outcome of Anterior Cruciate Ligament Reconstruction Using Quadrupled Hamstring Tendon Graft With Fixed Vs Adjustable Loop, 5. A Nodular Masquerade on 26-02-2026, Presented by Dr. Shobana Siva, Dr. Preetham, Dr. Priyanka, Dr. Yogeshwar Agharkar

## PATEN'S GRANTED BY IPR INDIA

क्रम सं/SL No :044204014

INTELLECTUAL PROPERTY INDIA

सत्यमेव जयते

पेटेंट कार्यालय,भारत सरकार | The Patent Office, Government Of India

पेटेंट प्रमाण पत्र | Patent Certificate

(पेटेंट नियमावली का नियम 74) | (Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No. : 580885

आवेदन सं. / Application No. : 202341055667

फाइल करने की तारीख / Date of Filing : 19/08/2023

पेटेंटी / Patentee : SREE BALAJI MEDICAL COLLEGE AND HOSPITAL

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित *SELF RETAINING PINNA RETRACTOR* नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख अगस्त 2023 के उन्नीसवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled *SELF RETAINING PINNA RETRACTOR* as disclosed in the above mentioned application for the term of 20 years from the 19th day of August 2023 in accordance with the provisions of the Patents Act,1970.

अनुदान की तारीख / Date of Grant : 17/02/2026

पेटेंट नियंत्रक Controller of Patents

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, अगस्त 2025 के उन्नीसवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।

Note. - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 19th day of August 2025 and on the same day in every year thereafter.

## Caffeine: The Liquid Lightning and the Science of Borrowed Energy

### The Ritual of the Modern Grind (Born from Sleep Deprivation)

Caffeine consumption doesn't usually start as a pursuit of luxury. For most, it begins with Sathya-like necessity—the student staring at a 2 AM textbook or the intern surviving a 36-hour shift. It is the primary chemical response to a society that treats "burnout" as a badge of honor. Before the first sip, the consumer is often drowning in chronic sleep debt: constant pressure to perform, cognitive fog, and the physiological demand to stay "on" when the body is screaming for "off.

**The Positive Aspect: The Neurological "Green Light"**

In small, controlled doses, caffeine is a marvel of pharmacology. It doesn't actually "give" you energy; it inhibits the inhibitors. By acting as a competitive antagonist to adenosine—the chemical that tells your brain it's tired—caffeine essentially holds the "pause" button on exhaustion. It sharpens focus, improves reaction times, and can even boost athletic performance by mobilizing fatty acids for fuel. It is, quite literally, a temporary cognitive upgrade.

### The Negative Aspect: When the Loan Comes Due

This "Hero" in the cup has a dark side. Because caffeine blocks adenosine rather than destroying it, the fatigue continues to build up behind the dam. When the caffeine wears off, the "crash" is the flood of accumulated adenosine hitting the receptors all at once. Over time, chronic use leads to upregulation, where the brain creates more receptors to compensate, requiring higher doses to achieve the same effect—a classic cycle of dependency and withdrawal-induced headaches.

### Impact on Youth: The High-Stakes Stimulation

The current generation is exposed to caffeine earlier and in more potent forms than any before it. From "gamified" energy drinks to high-sugar lattes, the youth are navigating a developmental phase where the prefrontal cortex is still under construction. Excessive caffeine can lead to heightened anxiety, disrupted sleep architecture—which is vital for memory consolidation—and a "new normal" of baseline jitteriness that mimics generalized anxiety disorder.

**Scientific Context and Recent Research**

Adenosine Antagonism: Caffeine's primary mechanism is its structural similarity to adenosine, allowing it tobind to A1 and A2A receptors without activating them. Dopaminergic Synergy: By blocking adenosine, caffeine indirectly increases dopamine signaling in thestriatum. Metabolic Variation: Genetic studies show that the CYP1A2 gene determines metabolism speed. Neuroprotection: Moderate coffee consumption may reduce neurodegenerative disease risk. The Half-Life Factor: Average half-life is 5–6 hours. The

**Reality Check**

In simple terms, caffeine is less of a "fuel" and more of a biological credit card. It allows you to borrow energy from tomorrow to pay for today's tasks. The brain is just too chemically distracted to realize how tired it is. It's a brilliant short-term hack, but eventually, the debt collector (sleep) always comes knocking at the door. Use it to write the essay, but don't expect it to fix a broken lifestyle.

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## AN OVERVIEW ON GENE EDITING & THE CONCERNS OF A MODERN EUGENICS

**Gene Editing at Birth: Are We Ready to Rewrite the Human Genome?**

Gene editing represents one of the most transformative scientific advances of the 21st century. With the development of CRISPR–Cas gene-editing technology, scientists can now modify DNA with remarkable accuracy. This capability has generated enormous hope for preventing inherited genetic diseases before birth. At the same time, it has raised deep ethical, medical, and social concerns, particularly when gene editing is applied to the human germline—changes that can be passed on to future generations.

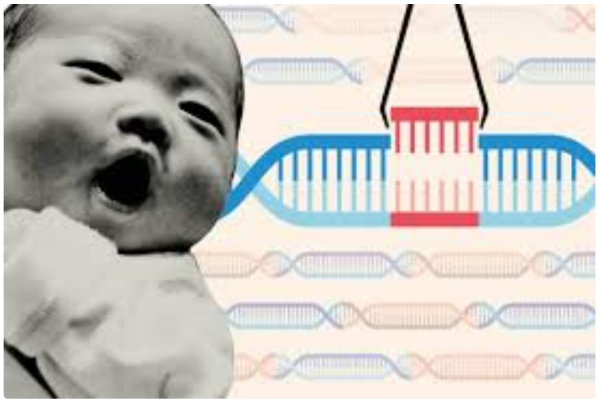
Often discussed under the term 'designer babies,' germline gene editing forces society to confront difficult questions: Should humans intervene in their own genetic inheritance? Can such powerful technology be used safely? And where should the boundary lie between treating disease and enhancing human traits? This editorial examines the science, risks, ethics, and governance of germline gene editing using current evidence from peer-reviewed literature and international policy frameworks.

**Understanding Germline Gene Editing**

Gene editing involves making precise changes to DNA sequences. In somatic gene editing, these changes affect only the individual receiving treatment and are not inherited. Germline gene editing, however, modifies embryos, eggs, or sperm, making the genetic changes heritable. Because these alterations affect not only one person but all future descendants, germline editing occupies a uniquely sensitive ethical position in medicine.

**The Medical Promise of Germline Editing**

The strongest ethical justification for germline gene editing is the prevention of severe monogenic diseases. Conditions such as Tay-Sachs disease, spinal muscular atrophy, cystic fibrosis, and Huntington disease cause profound suffering and often lead to early death. In rare circumstances, both parents may carry mutations that make it nearly impossible to conceive a genetically unaffected child through existing methods such as preimplantation genetic testing.



In such limited cases, germline gene editing has been proposed as a potential future solution. Importantly, major scientific bodies do not support its current clinical use. Instead, they outline hypothetical pathways in which germline editing might be considered only after strict demonstration of safety, necessity, ethical acceptability, and regulatory oversight.

**Scientific Risks and Limitations**

Despite its promise, germline gene editing remains scientifically uncertain. One major concern is off-target editing, where unintended regions of DNA are altered, potentially causing harmful mutations. Another challenge is mosaicism, which occurs when not all cells in an embryo receive the genetic modification, resulting in unpredictable outcomes.

Furthermore, genes often perform multiple biological functions. Altering a gene to prevent a specific disease may unexpectedly disrupt other physiological processes. Because germline changes are permanent and heritable, even small errors could have consequences that persist across generations.

**The CRISPR Babies Case: A Turning Point**

The global debate intensified in 2018 when Chinese scientist He Jiankui announced the birth of gene-edited infants. The experiment aimed to modify the CCR5 gene to confer resistance

to HIV. However, the procedure lacked sufficient ethical oversight, involved questionable consent practices, and offered no clear medical necessity. The international scientific community strongly condemned the work, and the incident highlighted the dangers of premature clinical application.

**Global Governance and Regulation**

In response to these concerns, international organizations have emphasized the need for strong governance frameworks. The World Health Organization has called for global registries, transparency, public engagement, and international cooperation in overseeing human genome editing. Similarly, national scientific academies advocate cautious, stepwise progress guided by ethical review and public trust.

Currently, most countries prohibit clinical germline gene editing while permitting tightly regulated laboratory research. This approach allows scientific understanding to advance without exposing individuals or future generations to unnecessary risk.

**Conclusion**

Gene editing provides humanity with unprecedented power over its own biological future. Used responsibly, it may one day prevent devastating genetic diseases. Used recklessly, it risks creating irreversible harm and deep social divisions. The challenge lies not in the capability to edit genes, but in the wisdom to decide when—and whether—we should.

Until safety, ethical clarity, and robust global governance are firmly established, germline gene editing must remain within the realm of research rather than routine clinical practice.

The decisions made today will shape not only the future of medicine, but the future of humanity itself.

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## From feather to fears: - Bird deaths reported in Chennai

As the sun began to rise, municipal workers were continuing their routine duties when they noticed a bird lying motionless near roadside. Initially it was ignored, however when more birds were found dead in other areas over next few days. Then health officials were informed of 1,500 cases, marking the beginning of H5N1 avian influenza. This virulent Influenza A virus is an enveloped RNA virus belonging to family Orthomyxoviridiae – influenza subtype A. the last century witnessed such pandemics in 1918 called Spanish flu and so on.

Between 29th of January 2026 and 4th of February 2026, Chennai has witnessed growing concerns over detection of avian flu. Tamilnadu - kerala corridor serves as interconnected

ecological & commercial zone for poultry trade. This border act as wetland for migratory birds and wild fauna. From birds to humans, this virus has crossed boundaries and raised global concerns.

This avian flu has increased pathogenicity and also the ability to form new viral subtype. The incubation period has found to be 4 days. Transmission is through human contact with infected animal's body fluid via saliva, droplets, feces. The clinical manifestation includes fever, sore throat, fever, cough and in severe cases chest pain, dyspnoea can also be triggered. An atypical feature has conjunctivitis, diarrhoea. They predominantly infect upper respiratory tract Case fatality rate cited as more than 50% in humans, more than 90% in birds and mammals.

Management comprises of hygiene, universal precautions namely hand washing, personnel protective equipment, double gloving for front line workers, tight fitted N95 micropore facemasks especially for anaesthesiologist who were exposed to respiratory secretions during airway intervention. Muscle relaxants were used to minimize duration of procedure and risk of spreading.

Antiviral drugs were used for the medical intervention such as Amantadine, Rimantidine, Oseltamivir, Zanamivir. Among those Amantadine and Rimantadine are less effective since H5N1 virus has shown resistance to these drugs. Vaccines are now being developed.

In the long run, maintaining control over H5N1 avian flu requires a global effort involving surveillance, threat identification, timely reporting, containment and continuous research remain key pillar in combating H5N1.

**Vigilance today prevents a pandemic tomorrow**

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