An Official Newsletter of
BALAJI
HERALD

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Sree Balaji Medical College and Hospital
Chrompet, Chennai, Tamil Nadu, India

BALAJI HERALD

(A News letter of)

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CONTENT

MESSAGE FROM THE EDITOR

Dear Readers,

We are delighted to present the fourth edition of the SBMCH Herald for this year, highlighting our institution's unwavering dedication to academic excellence, professional development, and a thriving community culture. We warmly welcome our newly inducted residents, faculty members, and staff, whose talents and perspectives further strengthen our academic ecosystem.

SBMCH continues to flourish as a hub of learning, innovation, and professional growth. Throughout the year, we have organized a wide range of conferences, workshops, and Continuing Medical Education (CME) programs, creating valuable opportunities for knowledge sharing, interdisciplinary engagement, and keeping pace with advancements in healthcare and medical research.

We are equally proud to feature the increasing number of research publications and patents achieved by our faculty, reflecting their commitment to scientific inquiry, innovation, and academic distinction.

More than a record of activities and achievements, this newsletter embodies the collective spirit of learning, discovery, and continuous improvement that defines our institution. As you explore its pages, we hope you gain insight into the enthusiasm, dedication, and collaborative efforts that continue to propel SBMCH toward greater excellence.

Editorial Committee

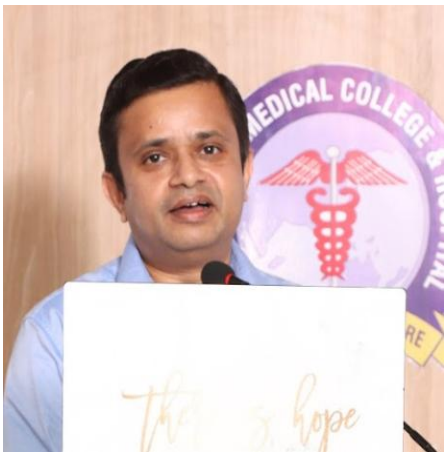
NATCOMED 2026

NATCOMED is a prominent annual national medical conference hosted by the Department of General Medicine on NATCOMED 2026- Obesity and Lipids: From Pathophysiology to Precision Therapeutics on 04.04.2026. National speakers; Dr. P. R. Devaki, Physiology Professor & Hod, Sbmch, Dr. S.N. Narasingan is a globally recognized authority in cardiovascular medicine, serving as Vice President of the World Hypertension League and Vice Chairman of the Lipid Association of India. As the Medical Director of SNN Specialities Clinic & Diagnostic Centre in Chennai, Dr. A. Sethuramashankaran is a distinguished Diabetologist and Bariatric Physician based in Chennai, Dr. S. S. Dariya, Associate Professor Department of Medicine, NIMS & R Jaipur. Speakers delivered the lecture on following topics; Pathophysiology of obesity and liquid metabolism, from stains to strategy evolving lipid care, beyond lifestyle pharmacological strategies for obesity management, The Obesity-Dyslipidaemia Axis: Implications for Cardiovascular Prevention

COLON CONNECT'26

Dept. of Pathology organised an International Conference Hybrid conference on Colon Connect'26 on 07.04.2026. We had an insightful colloquium on non-neoplastic diseases of the colon, delivered by Dr. Sandhya Sundaram, who highlighted key pathological aspects and their clinical significance. " Dr. Sandhya Sundaram Colloquium: Non-Neoplastic Diseases of Colon, Non-neoplastic diseases include inflammatory, infectious, ischemic, and microscopic conditions. Major IBD entities: Ulcerative Colitis and Crohn Disease.,UC: continuous mucosal disease starting from rectum., Crohn: transmural inflammation with skip lesions and granulomas. Infectious colitis: acute inflammation due to bacteria, viruses, parasites. Classic example: Pseudomembranous colitis → volcano lesions. Ischemic colitis: hypo perfusion

injury, especially at watershed areas. Microscopic colitis: normal colonoscopy but abnormal biopsy. Common symptoms: diarrhea, pain, bleeding, weight loss. Complications: toxic megacolon (UC), fistula/stricture (Crohn), carcinoma risk in long-standing IBD. Next, we proceeded to an engaging slide seminar on colonic lesions by Dr. K. S. Sunil Kumar, where participants explored microscopic features and diagnostic approaches through interactive discussion." Slide Seminar: Colonic Lesions, Colonic lesions include non-neoplastic and neoplastic spectrum. Non-neoplastic: hyperplastic, inflammatory polyps. Neoplastic: adenomas and adenocarcinoma. Denomas are precancerous dysplastic lesions. Types: tubular, villous, tubulovillous. Villous architecture → highest malignant potential. Dysplasia grading: low vs high grade. Carcinoma shows invasion beyond muscularis mucosa. Histology: atypical glands, nuclear



pleomorphism, desmoplasia. Immunomarkers: CK20+, CDX2+, mismatch repair proteins. an informative session on colonic lesions in clinical practice by Dr. R. Vinoth Kumar, focusing on real-life applications, diagnosis, and management strategies." Dr. Vinoth.kumar, Colonic Lesions in Clinical Practice, Colonic lesions present as bleeding, anemia, obstruction, or incidental findings. Right-sided lesions: occult bleeding, anemia. Left-sided lesions: obstruction, altered bowel habits. Red flags: weight loss, blood in stool, iron deficiency anemia. Colonoscopy = gold standard for detection and biopsy. Biopsy confirms histological diagnosis. Imaging (CT) used for staging and complications. Screening colonoscopy reduces colorectal cancer incidence. Molecular pathways: APC (adenoma-carcinoma), MSI (Lynch syndrome). Early detection improves prognosis significantly.

We then had a highly enriching masterclass titled 'Decoding the Polyp' by Dr. S. Rajendiran, who provided deep insights into the microscopic evaluation and classification of polyps." Dr.S. RAJENDIRAN, Decoding the Polyp: Microscopic Masterclass, Polyps are mucosal protrusions—neoplastic or non-neoplastic. Non-neoplastic: hyperplastic, juvenile (hamartomatous). Neoplastic: adenomatous and serrated lesions. Adenomas show epithelial dysplasia (mandatory feature). Serrated pathway includes hyperplastic, sessile serrated, traditional serrated adenomas. Sessile serrated lesions show boot-shaped/dilated crypts. Traditional serrated adenoma shows ectopic crypt formation. Dysplasia grading: low vs high grade. Malignancy risk ↑ with size >2 cm, villous pattern, high-grade dysplasia. Importance: early identification prevents progression to carcinoma.

WORKSHOP ON PCR – HCV

The Department of Microbiology and Medical Education Unit Conducted workshop on 09.04.2026 in the Department of Microbiology, Molecular Biology Diagnostic Lab and The workshop topic was “PCR - HCV”. The Speaker for the workshop was the Sankar Naynar Palani, Product manager – Molecular Division, Athenese – DX PVT, Ltd, who spoke on the applications the PCR and briefed on the programs in the PCR. This Session was followed by Hands on training to our technicians. The Staff who attended the workshop benefitted by the Session

NATIONAL CONFERENCE ON SUPERFICIAL MYCOSIS: AN UPDATE

Dept. of DVL organized a National Conference on superficial mycosis: an update on 13.04.2026. First session was by Dr. P. Joel Kuruvilla , Associate Professor, MOSC Medical College, Kerala, on the topic ,” Beyond Thrush: The Expanding Spectrum of Mucocutaneous Candidiasis. The second session was on the topic “Dermatophytosis: Understanding Emerging Trends in Daily Practice” by Dr. M. Abarna Muthulakshmi, Consultant Dermatologist, Chennai, The third session was on the topic “From Dermatophytosis to yeasts: A Microbiologist’s Perspective “, by Dr.Subha.M

CHITHIRAI FESTIVAL

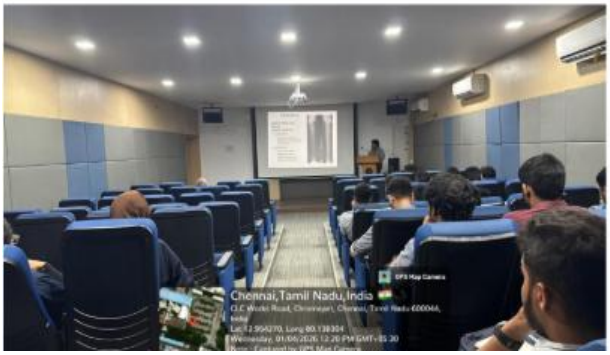
Tamil Forum of our institution organized a Pattimana on Is a Man's Happiness Before Marriage? After Marriage? On 29.04.2026. Guest from Dr. T.V.Asokan, Professor, Psychiatrist. Sri Muthukumaran Medical College.

SEMINARS

Department of Respiratory Medicine Conducted a Seminar on Small Airway Disease 2025-2026 01-04-2026 Presented by Dr. Shivam

Department of General Medicine Conducted a Seminar on Image of the week - Digital Substraction Angiography 01-04-2026 Presented by Dr.Avanthi raghav

Department of Orthopaedics Conducted a Seminar on Tibia vara 01-04-2026 Presented by Dr. Nimish Mehta, Dr. Jagadeeshraj S

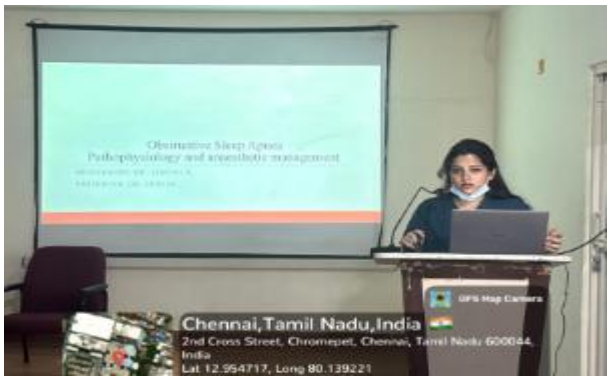


Department of Biochemistry Conducted a Seminar on Students Vitamin Seminar (I MBBS) - 2025-2026 on 02-04-2026 Presented by I MBBS Students

Department of Biochemistry Conducted on a Seminar on Mediastinal Anatomy & Clinical Significance 02-04-2026 Presented by Dr. Swetha

Department of Physiology Conducted a Seminar on Resting Membrane Potential 04-04-2026 Presented by Dr. A.Arun

Department of Anaesthesiology Conducted a Seminar on OSA Pathophysiology and anaesthetic management 06-04-2026 Presented by Dr Shreya Chakravarty

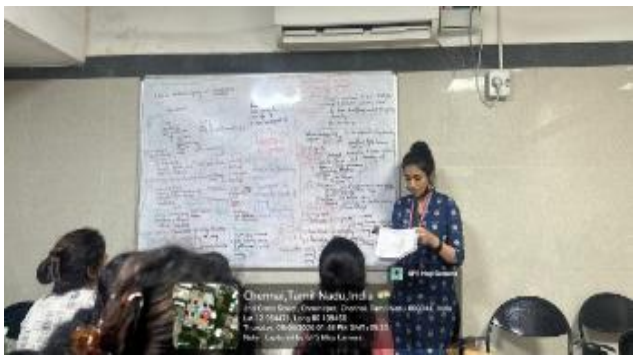


Department of Respiratory Medicine Conducted a Seminar on Fungal Lung Disease (Invasive vs Allergic vs Colonization) 06-04-2026 Presented by Dr. Ahmed Ali

Department of Pharmacology Conducted a Seminar on Routes of Drug Administration 07-04-2026 Presented by Dr. Koka Ram Sumanth

Department of Microbiology Conducted a Seminar on Microscope 08-04-2026 Presented Dr. Sushmitha A Cherian, Dr, Riidhy.D, Dr. Sathya Surya

Department of DVL Conducted a Seminar on Reactions in Leprosy on 09-04-2026 Presented by Dr. Lakshmi Nair



Department of Anatomy Conducted a Seminar on Triangles of Neck on 09-04-2026 Presented by Dr. Karthick

Department of Respiratory Medicine Conducted a Seminar on DLCO Interpretation on 10-04-2026 Presented by Dr. Jayavani

Department of Pathology Conducted a Seminar on The Bethesda System for Reporting Cervical Cytology – Part 2 on 13-04-2026 Presented by Dr. John

Department of Anaesthesiology Conducted on Seminar ASA Standerds fot basic anaesthetic monitoringon 13-04-2026 Presented by Dr Nikita Varma

Department of Orthopaedics Conducted a Seminar on Thesis Review 13-04-2026 Presented by Dr. Akileshwar S Dr. Aishwarya S Dr. Nimish Mehta

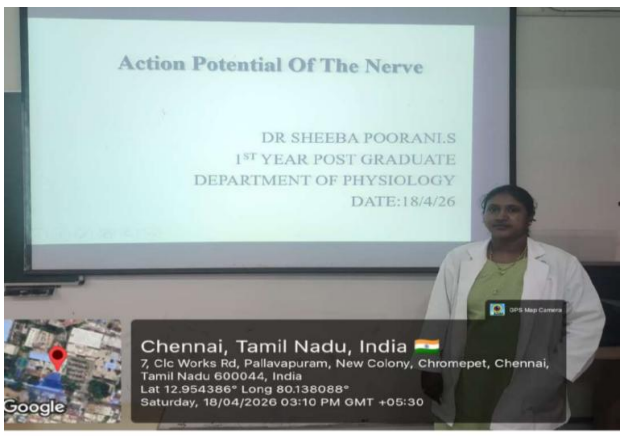
Department of Community Medicine Conducted a Seminar on Ayush Integration 15--04-2026 Presented by Dr. Elakkia M

Department of Orthopaedics Conducted on Seminar Thesis Review 15-04-2026 Presented by Dr. Shantanu Kumar Dr. Anurag Choudhary Dr. Yogeshwar A

Department of Pathology Conducted a Seminar on Leukemia on 17-04-2026 Presented by Dr. Salsabie

Department of Anaesthesiology Conducted a Seminar on Pottasium disorders on 17-04-2026 Presented by Dr Pranavi

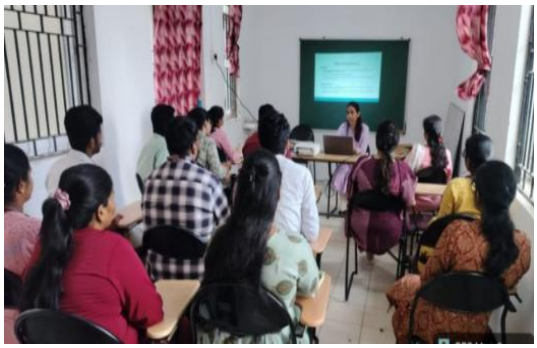
Department of Physiology Conducted on Seminar Action potential of nerve on 18-04-2026 Presented by Dr. S. Sheeba Poorani



Department of Anaesthesiology Conducted a Seminar on ETCO2 Monitoring on 17-04-2026 Presented by Dr. Malavika Nambiar

Department of Respiratory Medicine Conducted a Seminar Management of obstructive airway diseases on 17-04-2026 Presented by Dr. Ghanshyam verma

Department of Psychiatry Conducted a Seminar on Introduction to psychopathology on 20-04-2026 Presented by Dr. Nivethaa

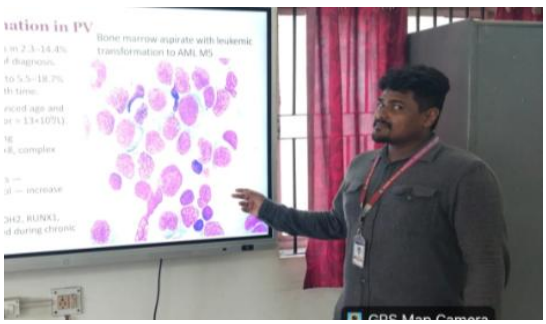


Department of Respiratory Medicine Conducted a seminar on Sarcoidosis on 20-04-2026 Presented by Dr. Deepak

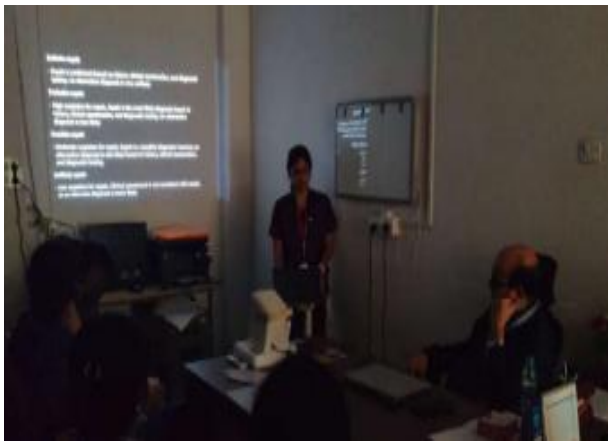
Department of Orthopaedics Conducted a seminar on Thesis Review on 20-04-2026 Presented by Dr. Ranjith M G Dr. Khadke Manish Avinash Dr. Salgaonkar Abhishek

Department of Psychiatry Conducted a Seminar on Disorders of Perception on 22-04-2026 Presented by Dr. Isha

Department of Pathology Conducted a Seminar on Who Hematolymphoid System: Polycythemia Vera on 22-04-2026 Presented by Dr. Washington



Department of Respiratory Medicine Conducted a Seminar on survival sepsis guidelines 2026 update on 22-04-2026 Presented by Dr. Preethi



Department of Orthopaedics Conducted a Seminar on Thesis Review 2026 update on 22-04-2026 Presented by Dr. Mahesh S Dr. Suraj Sunderraj Joseph

Department of Anatomy Conducted a Seminar on Major Salivary Glands. 2026 update on 22-04-2026 Presented by Dr.Karthick

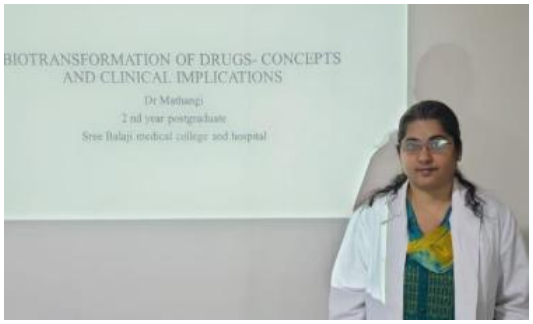
Department of Respiratory Medicine Conducted Seminar on Alveolar Gas Equation: Clinical Applications on 24-04-2026 Presented by Dr. Shiv

Department of Physiology Conducted a Seminar on Transport across cell membrane on 25-04-2026 Presented by Dr. P. Karthika

Department of Community Medicine Conducted Seminar on NVBDCP on 28-04-2026 Presented by Dr. Indhu Jannani

Department of Ophthalmology Conducted a Seminar on Idiopathic intracranial hypertension on 28-04-2026 Presented by Dr. Snegapriya

Department of Pharmacology Conducted a Seminar on Biotransformation- clinical aspects and its consequences on 29-04-2026 presented by Dr. M. Mathangi

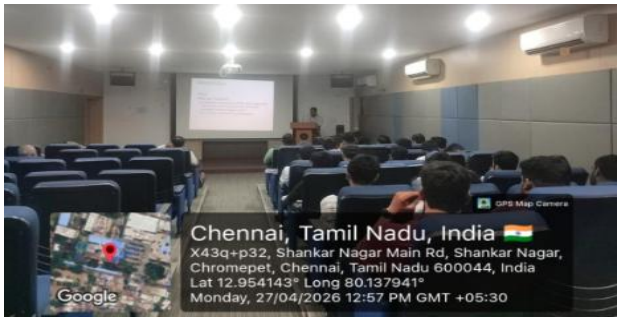


Department of Orthopaedics Conducted Seminar on central cord syndrome clinical features and its management on 29-04-2026 presented by Dr. Khadke Manish

SYMPOSIUM

Department of Pathology Conducted a Symposium on Tuberculosis on 01-04-2026 Presented by Dr. arkajaa, Dr. Abhirup, Dr. Bhavya, Dr. Keerthana, Dr. Logapriya, Dr. Thiruvenkat,Dr. Karthikeyan, Dr. Sylvia, Dr. Sanjeev, Dr. Zoharath.

Department of Orthopaedics Conducted Symposium on Dupuytren's Contracture on 27-04-2026 Presented by PG's



Department of General Medicine Conducted Seminar on interesting case of theweek-acute Pulmonary embolism - Factor V Leiden Gene Mutation on 30-04-2026 presented by Dr. Gannamaneni Vignesh Chowdary

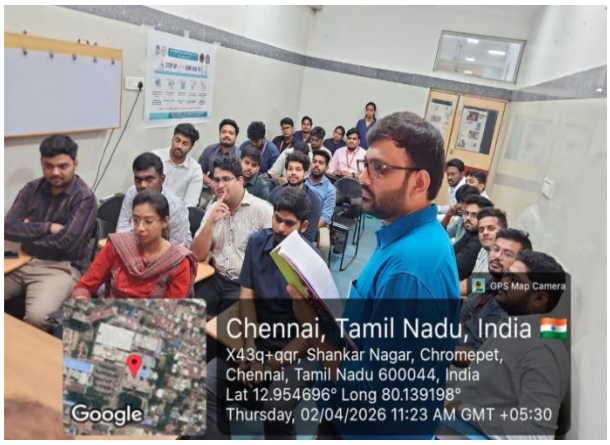
Department of Orthopaedics Conducted a Symposium on OA knee - synovitis on 06-04-2026 Presented by Dr. Mahesh S.

Department of Orthopaedics Conducted Symposium on Femoral head -osteology , blood supply in paediatric and adults and approaches to proximal femur on 18-04-2026 Presented by Dr. Anurag Choudhary.

Department of DVL Conducted Symposium on 1. Photobiology and normal cutaneous effects of UVR & 2. Photodermatoses on 30-04-2026 Presented by Dr. Lakshmi Nair, Dr. Nourin Basheer

CLINICAL DISCUSSION

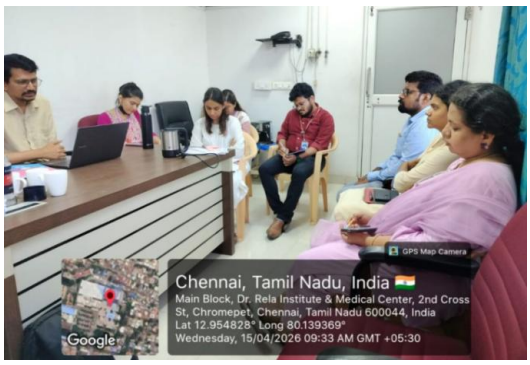
Department of Orthopaedics Conducted a Clinical Discussion on Case Presentation – Hip Case on 02-04-2026 Presented PG's



Department of Orthopaedics Conducted a Clinical Discussion on Case Presentation - Chronic Osteomyelitis on 07-04-2026 Presented PG's

Department of Psychiatry Conducted a Clinical Discussion on Clinical case conference on 13-04-2026 Presented by Dr. Rajnandini.

Department of Psychiatry Conducted Clinical Discussion on Clinical case conference on 15-04-2026 Presented by Dr. Amit D Khune



Department of Orthopaedics Conducted a Clinical Discussion on Case Presentation – T B Spine on 16-04-2026 Presented by PG's

Department of Orthopaedics Conducted a Clinical Discussion on Case Presentation - Non Union Neck of Femur fracture on 21-04-2026 Presented by PG's

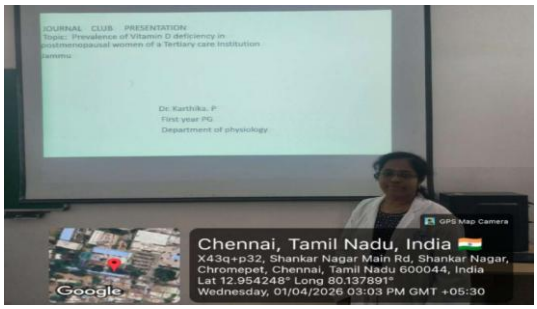
Department of Orthopaedics Conducted a Case Presentation - Tibia on 30-04-2026 Presented by PG's

Department of Psychiatry Conducted a Clinical Discussion on Psychosomatic case conference on 18-04-2026 Presented by Dr. Deepan Raj

Department of Orthopaedics Conducted Case Presentation - Femur fracture on 28-04-2026 Presented by PG's

JOURNAL CLUB

Department of Physiology Conducted a Journal Club on "Prevalence of Vitamin D Deficiency in Postmenopausal Women of a Tertiary Care Institution, Jammu" on 01-04-2026 Presented by Dr. P. Karthika.



Department of General Medicine Conducted Journal Club on new sepsis guidelines 2026 on 02-04-2026 Presented by Dr. Praveen

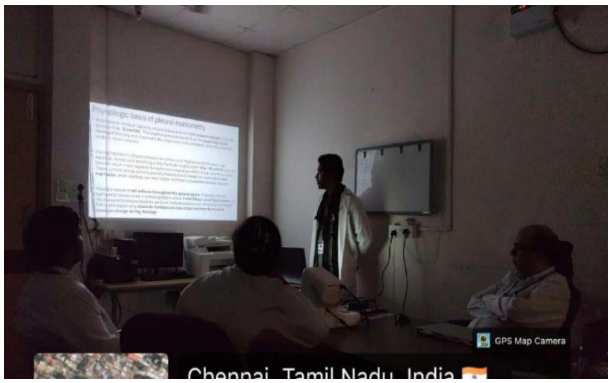
Department of Orthopaedics Conducted Journal Club on "Intra-articular Hyaluronic Acid for Knee Osteoarthritis Stabilizing Utilization Trends Amid Conflicting Clinical Practice Guidelines

Department of Physiology Conducted Journal Club on "A Cross-sectional Study on Prevalence of Hypertension and Pre-hypertension among Young Adults" on 08-04-2026 Presented by Dr. S. Sheeba Pooran.

Department of Pharmacology Conducted Journal Club on "Topical Antibiotics In The Prevention Of Port-Site Infection After Elective Day Care Laparoscopic Cholecystectomy" On 04-04-2026 Presented By Dr. T. Aishwarya.

Department of DVL Conducted Journal Club on "Onychomycosis - Diagnosis and management" on 07-04-2026 Presented by Dr. Lakshmi Nair

Department of Respiratory Medicine Conducted a Journal Club on “Pleural Manometry: Technique & Interpretation” on 09-04-2026 Presented by Dr. Sidharthan.

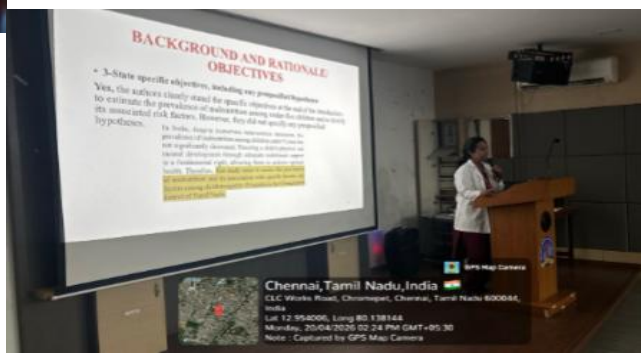


Department of Psychiatry Conducted Journal Club on “It's how to read an article” on 13-04-2026 Presented by Dr. Pragya.

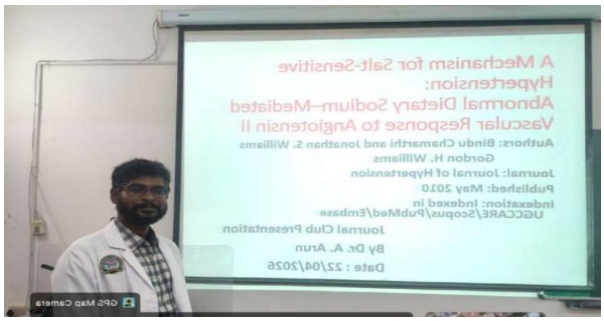
Department of Microbiology Conducted a Journal Club on “Assessment of antibiotic utilization patterns in an Indian Level – 1 Trauma center: A pilot study exploring days of antibiotic spectrum coverage and defined daily doses using WHO aware classifications trends” on 17-04-2026 Presented by Dr. Sowmya.

Department of Microbiology Conducted a Journal Club on “Isolation, identification and antifungal susceptibility of dermatophytes from clinical specimens in a tertiary care hospital in South Kerala” on 18-04-2026 Presented by Dr. Ram Kumar.

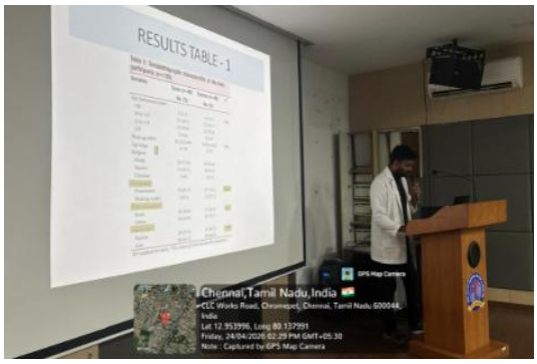
Department of Community Medicine Conducted a Journal Club on “JC on Cross sectional Study” on 20-04-2026 Presented by Dr. K.G. Janani.



Department of Physiology Conducted a Journal Club on “A Mechanism for salt sensitive hypertension: Abnormal dietary sodium, mediated vascular response to angiotensin II” on 22-04-2026 Presented by Dr. A. Arun.



Department of Community Medicine Conducted Journal Club on “JC on Case control study” on 25-04-2026 Presented by Dr. Praveen Murugesan.



Department of Respiratory Medicine Conducted Journal Club on “Pulmonary Artery Catheter: Waveform Interpretation” on 28-04-2026 Presented by Dr. Ahamed Ali.

Department of ENT Conducted Journal Club on “Vocal Cord Palsy And Management” on 28-04-2026 delivered by Dr. M K Rajasekar, Dr Vishwanath.

OUTREACH ACTIVITIES

Department of Community Medicine Conducted Outreach Activities on Free Medical Camp on 02-04-2026 at Tharapakkam

Department of Community Medicine Conducted Outreach Activities on Health Education on 17-04-2026 at SBMCH.

Department of Community Medicine Conducted Outreach Activities on Free Medical Camp on 25-04-2026 at Oragadam

Department of Community Medicine Conducted Outreach Activities on Free Medical Camp on 27-04-2026 at Oragadam

CME

Department of Ophthalmology Conducted a CME on An Overview of Refractive Surgery on 02-04-2026 delivered by Dr. Umadevi Jayavelu

Department of ENT Conducted CME on Cochlear Implants - Indications and Outcomes on 02-04-2026 delivered by Dr. Lokesh Y. G.

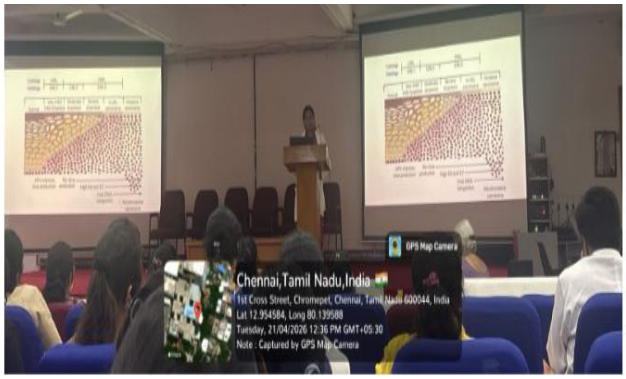
Department of Community Medicine Conducted CME on World Health Day 2026 on 08-04-2026 delivered by Dr. D. R. Vedapriya

Department of Physiology Conducted CME on “Wired to Remember: The Physiology of Learning and Memory”2026 on 18-04-2026 delivered by Prof. Dr. K. Umamaheswari

Department of General Medicine Conducted CME on "Osa- The Precision Assessment : Tailoring The Diagnostic Approach For Individual Patients 2026 On 27-04-2026 Presented By Dr.Arun Shanmuganathan

Department of General Medicine Conducted Clinical Society Meeting on 22-04-2026

Department of Pathology Conducted on Others on OBG Path Idm Squamous Cell Carcinoma – Cervix on 21-04-2026 presented by Dr. Angelin and Dr. Pragya



Department of DVL Conducted Clinical Pathological Conference on 1 Pyogenic granuloma 2. Neurofibroma on 10-04-2026 presented by Dr. Salikaa

Department of Pathology Conducted on CME on chronic synovitis on 10-04-2026 presented by Dr. John and Dr. Mahesh

Department of Anaesthesiology Conducted Quiz on PG quiz on Obesity on 10-04-2026 Presented by Dr Sathya Suba

ARTICLE ‘S

ARE WE OVER MEDICALIZING NORMAL LIFE?

A CRITICAL LOOK AT OVERDIAGNOSIS AND THE EXPANSION OF DISEASE

Medicine has always aimed to relieve suffering and improve human life. Over the past century, remarkable advances such as antibiotics, vaccines, and sophisticated imaging technologies have transformed healthcare. However, alongside these achievements, an important debate has emerged within the medical community: are we increasingly turning normal human experiences into medical problems?

The concept of overmedicalization refers to the process by which ordinary aspects of human life become defined and treated as medical conditions. While early diagnosis and preventive care are essential parts of modern healthcare, the expansion of disease definitions and diagnostic technologies may sometimes lead to the identification of conditions that would never have caused harm if left untreated.

A closely related concept is overdiagnosis, defined as the diagnosis of a disease that would not have produced symptoms or affected a person's lifespan. In such situations, individuals may undergo treatments, investigations, or long-term medication without clear benefit. This raises important ethical and clinical questions about how medicine defines illness and health.

Research evidence suggests that overdiagnosis and excessive testing are not rare phenomena. A global scoping review analyzing 154 studies across 55 countries involving more than 2.8 million participants found substantial evidence of overdiagnosis and unnecessary diagnostic testing in many healthcare systems. Nearly 45% of the studies examined overdiagnosis of diseases, while approximately 40% focused on the overuse of diagnostic tests. Imaging technologies were among the most commonly overused medical interventions.

The prevalence of inappropriate laboratory testing has also been studied extensively. A systematic review published in the journal BMJ Quality & Safety found that unnecessary testing varied widely across clinical settings, ranging from 0.09% to nearly 97% depending on the clinical context and type of investigation. Excessive testing not only increases

healthcare costs but may also expose patients to radiation, falsepositive results, and psychological distress.

Cancer screening programs provide one of the most striking examples of the complexity surrounding overdiagnosis. Screening has undoubtedly saved lives by detecting cancers at earlier stages. However, it can also detect slowgrowing tumors that might never have progressed to cause symptoms. Thyroid cancer illustrates this phenomenon clearly. In several countries, the incidence of thyroid cancer increased dramatically after the introduction of widespread ultrasound screening, while mortality rates remained relatively stable. This suggests that many detected tumors may represent clinically insignificant disease.

Mental health is another area where the boundaries between normal experience and medical diagnosis can be difficult to define. Emotional responses such as grief, anxiety, or sadness are natural parts of human life. However, expanding diagnostic criteria may sometimes classify these experiences as psychiatric disorders. While medical recognition can provide support and treatment for those in need, it may also risk labeling normal emotional variation as illness.

Another factor contributing to overmedicalization is the increasing tendency to treat risk factors as diseases themselves. Mild elevations in blood pressure, cholesterol, or blood glucose levels may lead to lifelong medical therapy even when the risk of complications is relatively low. Preventive medicine plays a crucial role in public health, but expanding treatment thresholds may label large segments of the population as chronically ill.

The consequences of excessive medical intervention extend beyond individual patients. Unnecessary treatments may expose people to side effects and complications, while also placing additional financial pressure on healthcare systems. Scholars have described this phenomenon as 'too much medicine,' emphasizing that excessive medical activity can sometimes cause harm rather than benefit.

Despite these concerns, medicalization has also produced important benefits. Many conditions that were once misunderstood or ignored—such as autism spectrum disorder and attention deficit hyperactivity disorder—have gained recognition through medical research. This recognition has improved access to treatment, social support, and public awareness.

Ultimately, the challenge is to maintain a balance between early diagnosis and unnecessary intervention. Evidencebased guidelines, shared decisionmaking between doctors and patients, and critical evaluation of diagnostic technologies can help ensure that medicine continues to benefit society without redefining normal life as disease.

Modern medicine possesses extraordinary capabilities, but with these capabilities comes responsibility. Not every abnormal test result represents illness, and not every human experience requires medical treatment. Sometimes, the most important decision in healthcare is recognizing when medicine should step back and allow the natural variations of life to unfold.

MOBILE USAGE VS CHILD'S DEVELOPMENT

The Digital Revolution with rapid digitalization, mobile phone usage among children has increased drastically. Paediatricians and psychologists are alarmed about its impact on physical growth, behaviour, and brain development, especially during early stages of childhood. This could affect their ability to develop healthy relationships with people around them as they grow older. Screen Time Explosion: A Global Trend there has been an increase in screen exposure among children, with many spending between 3 to 7 hours daily on mobile devices. This trend is particularly prominent in urban populations and among school-going children, where access to digital technology is higher and increased development of E-Learning across various institutions. Regardless of the socioeconomic status, the accessibility and the owning of the mobile phones is same across the globe. Mobile phone usage among children can be broadly categorised into educational purposes: e-learning, entertainment including games and videos, and social media interaction. Additionally, usage can be passive, such as watching videos, playing games or engaging in educational apps. The growing trend of "digital babysitting," where devices are used to occupy children, further worsens the issue. Several factors contribute to increased screen exposure, including urban lifestyle, working parents, easy access to smartphones, lack of outdoor play opportunities, and the surge in e-learning during the COVID-19 pandemic. The Multi-systemimpact children may develop obesity, poor posture; "text neck syndrome," and sleep disturbances. Excessive screen exposure is associated with attention deficits, poor academic performance etc. Reduced verbal interaction with family members or caregivers can lead to delayed speech, limited

vocabulary, and impaired communication skills. Children may exhibit social withdrawal, irritability, aggression, anxiety, and in rare cases even symptoms of depression. Exposure to blue light from screens suppresses melatonin production which is essential for sleep regulation: This can result in insomnia, poor sleep quality, and daytime fatigue, in addition to eye strain, headache, dry eyes, and an increasing incidence of myopia (shortsightedness) among children.

Paediatricians play a crucial role in identifying early signs of excessive screen use, counselling parents, monitoring growth and development, and promoting healthy lifestyle habits. Parents should take this seriously and take required action so as to give their child a healthy environment and the best childhood like setting daily screen time limit, engaging them in outdoor activities & indoor games, avoid using mobiles in-front of the children on a longer span as well as spending time with them.

“Screens can educate, but they should never replace childhood”

By:-Mehadhi Maniraman
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THE SCIENCE BEHIND SPIDER-MAN VILLAINS: PART 1
NORMAN OSBORN / GREEN GOBLIN: SUPER-SOLDIER OR SPLIT MIND?

All of us have watched the OG Spider-Man trilogy starring Tobey Maguire at some point in our lives. If you haven’t, well, better late than never! As we begin this series exploring Spider-Man villains through a medical and scientific lens, there’s no better starting point than Norman Osborn, the original Green Goblin from Spider-Man, portrayed chillingly and brilliantly captured by Willem Dafoe.Dissecting his role,from the founder and CEO of **Oscorp**, a company based in New York specialising in chemical and military technology, to a strict but loving father to Harry Osborn, we try to understand how and why he became a villain when he was so passionate about helping the world of military and science to produce new technologies to improve their military capabilities. He is pushed to be a villain after being stripped off his role as the company’s CEO, mind you, it’s a huge company that he built and ran himself so it is like another child to him. After this, he decides to subject himself to the performance enhancing serum to prove to them that his research will indeed help the militaryto be more efficient. This, however, turns him into the Green Goblin. It’s safe to say that this was a science experiment gone wrong. Very wrong.

His transformation is one of the most iconic in superhero cinema. But it also raises fascinating questions:

- Can a chemical really enhance human strength and intelligence?
- Can it create a completely separate personality?

Let's break it down: movie logic vs real-life medicine.

The Transformation: What Happens to Norman Osborn?

In the film, Norman Osborn, a brilliant scientist and CEO, tests an experimental performance-enhancing serum on himself. Thisnot only results in him gaining enhanced strength, reflexes and endurance but he also develops heightened aggression and development of an alternate personality: the Green Goblin.

Movie Logic

The serum acts like a "perfect enhancer" and boosts physical abilities to superhuman levels, sharpens intelligence, unlocks suppressed aggression and creates a dual personality that takes control over him, ending up with two personalities: the Green Goblin and the "cowardly" Norman Osborn.

Real-Life Logic

1. Can a Serum Make You Superhuman?

Sadly,no.At least not like this.

In reality: Performance-enhancing drugs (like anabolic steroids) can increase muscle mass and aggression, but:

  - Effects are gradual and not instant like shown in the movie.
  - They come with severe side effects affecting the cardiac system, liver and may cause psychiatric symptoms too.

- Experimental gene therapies are being studied, but:
  - They cannot instantly rewire the body.
  - They are highly controlled and nowhere near "super-soldier" level.

A single exposure causing instant transformation plus an intelligence boost is biologically unrealistic.

2. The Psychology: Where the Film Gets Interesting

Norman's most compelling feature is not his strength but rather his split personality: the Goblin vs Norman.

Is the Green Goblin a Dissociative Phenomenon?

In the film, Norman talks to himself in mirrors, experiences internal conflict and loses control to an alternate identity.This resembles features ofDissociative Identity Disorder.

Dissociative Identity Disorder (DID)

Dissociative Identity Disorder or DID means there is a presence of two or more identities, the person experiences gaps in memory and under intense stress the identity switching occurs.However, there is an important distinction between what is real and what fiction. DID is usually linked to severe childhood trauma and not just some chemicals in a science experiment gone wrong.

Also, not all personalities are inherently violent masterminds that always criticise and encourage more negative thoughts to the person having them,pushing them to the brink andposing the person as a threat to not only themselves but also potentially others.Some alternate personalities are known to just co-exist without causing auditory hallucinations or other cognitive disturbances.

Why this is more of a Substance-Induced Psychosis

A more medically accurate explanation could be that the serum may have triggered:

- Paranoia
- Hallucinations (auditory and visual)
- Delusions of power and control

This aligns with:

- Drug-induced psychotic states seen with substances affecting dopamine pathways

His “Goblin voice” could be interpreted as hallucinations with disinhibited aggression, not just a true second personality.

What Happens to His Brain?

If we try to “diagnose” the Goblin:

Possible effects of the serum:

- Prefrontal cortex impairment → poor judgment, impulsivity
- Amygdala over activation → heightened aggression and fear
- Dopamine dysregulation → grandiosity, delusions

This combination can produce:

- Risk-taking behaviour
- Reduced empathy
- Violent tendencies

Physical Changes: Are they possible or not?

We see that in the movie, Norman shows super strength, enhanced stamina and no fatigue while fighting Spider-Man. But in reality, even the most trained athletes are limited by muscle fibre capacity and require oxygen, ATP and recovery time to perform well. A serum that gives you instant muscle gain, no fatigue and no injuryis biologically impossible with our current science.

The "Perfect Soldier" Myth

Norman's experiment reflects a long-standing scientific fantasy to create a human who is stronger, faster, smarter, and more aggressive.Real-world attempts in the fields of military, pharmacology and neuroscienceshow that enhancing one domain such as strength can often harmanother domainlike mental stability. The brain and body operate on delicate balance, calledthe "homeostasis" and not at "max settings".

The Goblin is essentially a loss of this balance, not an upgrade.

A Medico Take: What Norman Osborn Really Represents

From a medical perspective, Norman Osborn is not just a villain.He represents the dangers of unchecked experimentation, how there's a thin line between enhancement and pathology and how power without regulation leads to psychological collapse.

His transformation is less about gaining power and more aboutlosing control over both mind and body.

Final Thoughts

To conclude,the Green Goblin may be fictional, but the underlying themes are very real:

- Substance misuse can alter personality.
- Brain chemistry strongly influences behaviour.
- "Enhancement" without understanding consequences can be destructive.

A serum won't turn someone into a superhuman flying villain. But it could, in theory, push the brain into aggression, paranoia, and loss of reality, which is far more unsettling.

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FROM STANDARD TO STRATEGIC: A NEW APPROACH TO S. AUREUS TREATMENT

Staphylococcus aureus bacteremia (SAB) is a serious cause of bloodstream infection and it is associated with significant morbidity and mortality. It has many complications which include infective endocarditis, device-associated infection, osteoarticular metastases, pleuropulmonary involvement, and recurrent infection. Staphylococcus aureus bacteremia has a case fatality rate of 15% to 30% and it causes 3,00,000 deaths per year worldwide. Patients with Staphylococcus aureus bacteremia commonly present with fever or symptoms from metastatic infection, such as pain in the back, joints, abdomen or extremities, and/or change in mental status.The results from traditional treatment options for SAB have been suboptimal, especially in high risk cases. Standard treatment for SAB includes antibiotic monotherapy, usually with vancomycin or daptomycin as they are the first-line drugs for this infection. A recent study conducted by the IDIBELL, Bellvitge University Hospital, and the University of Barcelona which was published in *The Lancet Regional Health – Europe*, has proposed a new approach to the treatment of SAB. This study emphasises the need for targeted treatment using risk stratified combination antibiotic therapy. This marks a significant milestone in the evolution of modern clinical management.

How does it act?

The newly proposed treatment includes agents like fosfomycin along with traditional anti-staphylococcal drugs. Combined antibiotics have a synergistic effect as they enhance the antimicrobial activity by targeting multiple bacterial pathways at the same time, which leads to accelerated destruction of the microbe. Using more than one drug also reduces the chances of the bacteria to develop resistance. The pinnacle of this research is not the drug combination itself, but the personalised application based on the patient's risk profile, ensuring that the intensified therapy will be of utmost benefit to the patient. A study was conducted with 155 patients from 18 Spanish hospitals where they compared the use of daptomycin with a combination of daptomycin and fosfomycin. Another study was conducted with 215 patients from 19 hospitals that compared cloxacillin monotherapy with a combination of cloxacillin with fosfomycin. At first, the results from both the studies did not show any significant difference in combined therapy in the overall set of patients. A new risk group analysis was done, and it was found that low risk patients with no complications do not benefit from combined therapy, whereas high risk patients showed a drastic reduction in

mortality rate at 60 days (23.1% vs 45.2%) and therapeutic success in just 8 weeks (69.2% vs 25.8%).

BALANCING EFFICACY AND SAFETY

While combination therapy clearly has many advantages in certain patients, it also faces its own challenges. When we use multiple antibiotics, there is an increased risk of drug toxicity, especially in critically ill patients. There could also be drug interactions and other adverse effects. Hence, there must be careful consideration of these risks before initiating combination therapy for any patient. One of the drawbacks is that, combination therapy does not improve the condition of patients with no complications. This breakthrough in SAB management could open doors for further research. Large-scale trials must be done to fine-tune the risk stratification methods and to optimize antibiotic combinations. Currently, stratification is done through the FEN-AUREUS classification: A recently developed clinical tool that allows estimating the risk of mortality with information available within the first 24 hours of evolution and the complication criteria of the Infectious Diseases Society of America (IDSA). Recent advances in rapid diagnostic techniques, could potentially allow earlier identification of patients in the high-risk category.

The shift from traditional monotherapy to a strategic combination therapy reflects a much deeper understanding of the complexity of this disease and variability of patient requirements. This marks a major step forward in infectious disease management all around the world. This techniquemainly acknowledges the fact that not all patients derive equal benefit from the same intervention. This could serve as a blueprint for treatment of other infectious diseases as well. In essence, the management of SAB lies in knowing when to use monotherapy and when combination therapy would be the right choice.

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INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

सत्यमेव जयते

क्रम सं/SL No :044206568

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.	:	587726
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फाइल करने की तारीख / Date of Filing	:	06/05/2023
पेटेंटी / Patentee	:	SREE BALAJI MEDICAL COLLEGE AND HOSPITAL

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित *A SYSTEM FOR DETERMINATION OF ESTRADIOL FROM FRACTAL DIMENSION OF OVARIAN IMAGE* नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख मई 2023 के छठे 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 *A SYSTEM FOR DETERMINATION OF ESTRADIOL FROM FRACTAL DIMENSION OF OVARIAN IMAGE* as disclosed in the above mentioned application for the term of 20 years from the 6th day of May 2023 in accordance with the provisions of the Patents Act,1970.

अनुदान की तारीख : 27/04/2026
Date of Grant :

पेटेंट नियंत्रक
Controller of Patents

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

Note. - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 6th day of May 2025 and on the same day in every year thereafter.

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADEMARKS
GEOGRAPHICAL INDICATIONS

सत्यमेव जयते

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पेटेंट कार्यालय,भारत सरकार
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It is hereby certified that a patent has been granted to the patentee for an invention entitled *A SYSTEM FOR DETERMINATION OF SERUM LIPASE FROM FRACTAL DIMENSION OF ULTRASONOGRAPHY OF PANCREAS IMAGE* as disclosed in the above mentioned application for the term of 20 years from the 13th day of July 2024 in accordance with the provisions of the Patents Act,1970.

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