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MONTHLY APPRECIATION
JULY -2025

CIRCULAR

Sir CV Raman Research Council, Office of Joint Registrar (Research), is happy to appreciate the staff members who have made due efforts to publish their papers in **WOS & SCOPUS** Indexed Publications, which are updated in July 2025. We are also pleased to announce the “**STAR FIRST AUTHOR**” and “**STAR CO-AUTHOR**” and “**STAR RESEARCH SCHOLAR/STUDENT**” of **JULY 2025**.

 Sir. C.V.Raman Research Council	STAR FIRST AUTHOR (FA CATEGORY)	Dr. S. SRIDEVI (PHARMACY)	
 Sir. C.V.Raman Research Council	STAR CO-AUTHOR (CA CATEGORY)	Dr. D.SUJATHA (AHS)	
 Sir. C.V.Raman Research Council	STAR RESEARCH SCHOLAR/ STUDENT	Ms.N.NISHA RESEARCH SCHOLAR (CIVIL) Guide : Dr.T. FELIX KALA Joint Registrar - E&T	

The details of the author's publications are listed herewith, reference to MGR Research Engine @ <http://drmgrdu.researgence.com>

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	EXPLORING THE IMPACT OF ARTIFICIAL SWEETENERS ON DIABETES MANAGEMENT AND GLYCEMIC CONTROL		 Ms. MANISHA M (PHARMACY)
AUTHORS	RUKAIAH FATMA BEGUM, NIRENJEN S, RAPURU RUSHENDRAN, MANISHA M, ANKUL SINGH SURESH PRATAP SINGH, SRIDEVI SHANMUGAM.		
JOURNALNAME	FRONTIERS IN NUTRITION		
SNIP-1.171	IMPACTFACTOR - 5.1	INDEXED-WOS/SCOPUS	

ABSTRACT

Diabetes mellitus (DM), a chronic metabolic disorder characterized by impaired glucose metabolism, has emerged as a significant global health challenge. Effective management of diabetes encompasses not only medical interventions but also lifestyle and dietary modifications. Artificial sweeteners (ASs), due to their low caloric content and minimal impact on blood glucose levels, offer promising potential as sugar substitutes for individuals aiming to manage glycemic control. Compounds such as aspartame, sucralose, and stevia mimic the sweetness of sugar without causing hyperglycemia, making them suitable for diabetic patients. This chapter explores the role of ASs in diabetes management, with a special focus on their mechanisms of action, including modulation of insulin sensitivity and glucose metabolism. An extensive review of preclinical and clinical studies evaluates the efficacy, safety, and long-term effects of ASs in glycemic control, highlighting their ability to reduce caloric intake, promote satiety, and support glycemic control and insulin sensitivity in individuals with diabetes. Emerging evidence suggests that ASs may influence gut microbiota, potentially affecting metabolic outcomes and insulin sensitivity, thus presenting opportunities for personalized interventions. Despite their benefits, awareness of potential risks, such as altered taste perception and over-reliance on ASs, is crucial. Integrating ASs within a broader lifestyle approach, comprising regular exercise and balanced nutrition, ensures optimal outcomes in diabetes management. This chapter emphasizes the importance of precision medicine in tailoring AS use to individual metabolic responses, underscoring its role as an adjunct to comprehensive diabetes care strategies.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	LETTER TO THE EDITOR: MOLECULAR STRATIFICATION IN PAPILLARY THYROID CARCINOMA: SHOULD RET FUSIONS REDEFINE AGGRESSIVENESS IN THE POST-BRAF ERA		 Dr. D.SUJATHA (AHS)
AUTHORS	MADHAN KRISHNAN, KAMAL KUMAR CHAWLA, SHYAMALA DEVI BABU, SUJATHA DURAISAMY, ALFRED SOLOMON, PRISCILLA DANIEL, BILLY ASIR, SAROJINI K		
JOURNALNAME	ORALONCOLOGY		
SNIP-1.387	IMPACTFACTOR - 3.9	INDEXED-WOS/SCOPUS	

ABSTRACT:

Recurrent and metastatic head and neck squamous cell carcinoma (R/M HNSCC) has historically carried an extremely poor prognosis, with historical standard-of-care systemic therapies offering a median overall survival of less than 10 months. The management paradigm was long dominated by toxic, platinum-based chemotherapy regimens combined with anti-EGFR targeted therapies (the EXTREME trial protocol). However, the therapeutic landscape has been fundamentally reordered by the introduction of immune checkpoint inhibitors targeting the programmed cell death 1 (PD-1) and programmed cell death ligand 1 (PD-L1) pathways. **OBJECTIVES:** This comprehensive review synthesizes clinical trial frameworks, benchmark efficacy updates, and evolving biological insights that have propelled immunotherapies from second-line salvage therapies to the frontline standard of care in R/M HNSCC management. **KEY HIGHLIGHTS & CLINICAL DATA:** The landmark phase III KEYNOTE-048 trial successfully shifted the first-line paradigm. Pembrolizumab monotherapy demonstrated clear superiority in overall survival (OS) compared to standard chemotherapy in tumors expressing PD-L1 with a Combined Positive Score (CPS) ≥ 1 and CPS ≥ 20 , providing significantly more durable clinical responses and a vastly superior safety profile. For patients with aggressive disease kinetics or low biomarker expression, pembrolizumab combined with platinum-fluorouracil chemotherapy outperformed traditional therapy regardless of CPS score, thereby establishing a new multi-tiered first-line standard. This follows established second-line proof-of-concept benchmarks from CheckMate 141 and KEYNOTE-040, where anti-PD-1 monotherapy (nivolumab and pembrolizumab) significantly prolonged survival in platinum-refractory patients over investigator-selected standard options

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION-JULY 2025

PAPERTITLE	EXPLORING THE IMPACT OF ENDOCRINE DISRUPTORS ON HORMONAL REGULATION AND ADIPOSE TISSUE IN HEALTH AND OBESITY		 Dr. ANKUL SINGH (PHARMACY)
AUTHORS	S NIRENJEN, ANKUL SINGH SURESH PRATAP SINGH , R F BEGUM, E ARUN, C VELLAPANDIAN, J NARAYANAN		
JOURNALNAME	JOURNAL OF ENDOCRINOLOGY		
SNIP-0.923	IMPACTFACTOR - 3.9	INDEXED - SCOPUS/WOS	

ABSTRACT:

Endocrine disruptors (EDs) are exogenous substances that interfere with the endocrine system, leading to adverse health outcomes. These substances, prevalent in industrial pollutants, pesticides, plastics, and personal care products, significantly impact hormonal regulation and disrupt various physiological processes. This review explores the sources and health impacts of EDs, focusing on their interference with hormonal axes, fetal development, and adipose tissue function. It highlights underlying mechanisms such as epigenetic modifications and discusses strategies to reduce ED exposure. Recent research reveals that EDs affect estrogen, androgen, and thyroid hormone signaling, contributing to developmental, reproductive, and metabolic disorders. Their interference with hormonal regulation is linked to abnormalities during fetal development and obesity through altered adipogenesis-related gene expression. Mechanisms such as DNA methylation, hypoxia-inducible factor signaling, and histone modifications play pivotal roles in ED-induced disruptions. Addressing ED exposure requires a multifaceted approach, incorporating lifestyle changes and public health initiatives to mitigate risks. Continued research is essential to better understand their effects and develop effective strategies for reducing their impact.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPER TITLE	PROMISING OUTCOMES OF ULTRASOUND-GUIDED PULSED RADIOFREQUENCY FOR THE TREATMENT OF MORTON'S NEUROMAS - A PROSPECTIVE STUDY		 Dr MADHAN JEYARAMAN (ACSMCH)
AUTHORS	LUCAS FURTADO DA FONSECA, RODRIGO CORTES VICENTE, JOSE FABIO LANA, LEONARDO FERNANDEZ MARINGOLO, NACIME SALOMAO MANSUR, MADHAN JEYARAMAN , SWAMINATHAN RAMASUBRAMANIAN		
JOURNAL NAME	PAIN PHYSICIAN		
SNIP-NIL	IMPACT FACTOR -2.5	INDEXED-SCOPUS/WOS	

ABSTRACT:

These modern deep learning models, such as VGG16 and MobileNetV2, will be utilized in this study to classify Brain tumors from a unique, specialized MRI dataset. The dataset consists of brain tumor original and augmented images as a two-class (yes/no) classification problem domain, where yes indicates the presence of a tumor, while no corresponds to its absence. Two models, VGG16 and MobileNetV2, support deep convolutional layer operations, well known for their very deep architecture; the other one is optimized for efficiency with depth-wise separable convolutions and is used to evaluate their performance in accurately classifying MRI images. The models use similar data preprocessing and regularization techniques; however, their performance metrics are different. Accuracy, precision, recall, and F1-score are the evaluation metrics for each of the five models to understand how well these differentiate between tumor images and non-tumor images. This study is designed to improve the ability of brain tumor detection, thereby assisting in more reliable diagnosis and clinical decision-making.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JULY 2025

PAPERTITLE	AN INVESTIGATION INTO MALE INFERTILITY CAUSED BY HORMONAL IMBALANCE AND HYPERTENSION BROUGHT ON BY SARS-COV-2		
AUTHORS	R PARAMESWARI, KASTHURI K, R BABU JANARTHANAM, GANESA MOORTHY R, GOMATHI RAMASAMY, YOGESH T		
JOURNALNAME	MIDDLE EAST FERTILITY SOCIETY JOURNAL		
SNIP-0.644	IMPACTFACTOR-1.3	INDEXED-WOS/SCOPUS	

ABSTRACT:

Recent statistics suggest that birth rates are declining worldwide; in parallel, recent studies have also shown that birth rates have decreased since the emergence of SARS-CoV-2. The etiology of the viral infection and its relationship to fertility are currently being investigated. As a result, this study focused on males who recovered from SARS-CoV-2 and had hormonal anomalies associated with high blood pressure, which might lead to male infertility. The study population consisted of men aged 20–39 years ($N = 150$) from the Vellore region who had recovered from SARS-CoV-2 infection within the previous 6 months, as determined through a questionnaire-based survey. Ethical approval was obtained from the relevant institutional review board before data collection. Semen samples were collected and analysed according to the World Health Organization (WHO) guidelines (2021) for conventional semen parameters. Standard hormonal and biochemical tests were performed using established protocols. In addition, trace element concentrations in serum and seminal plasma were analysed. The hypo-osmotic swelling test (HOST) was used to assess sperm viability, and acrosome integrity was evaluated with staining techniques. Increased blood pressure (BP) was suggested by semen parameters with reduced sperm motility and sperm count in patients infected with SARS-CoV-2 compared to healthy subjects. Despite the reduction in sperm protein, it was associated with a decrease in biochemical nutrients. Furthermore, poorer antioxidant and biochemical markers against ROS were observed, and these differences were statistically significant ($P < 0.05$). Differences were identified between SARS-CoV-2 recovered men and healthy fertile men in terms of sperm protein fragmentation and loss of sperm membrane integrity, accompanied by structural damage to the acrosome. This study confirmed that SARS-CoV-2 enters the body via angiotensin-converting enzyme 2 (ACE2) in recovered patients, affecting the physiological homeostasis mechanism by triggering blood pressure changes associated with declined male reproductive characteristics (especially testosterone), resulting in a poor semen profile and infertility.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JULY 2025

PAPERTITLE	INFLUENCE OF PHYSICAL ACTIVITY AND DIETARY CHANGES ON INSULIN SENSITIVITY IN NON-ALCOHOLIC FATTY LIVER DISEASE		 Dr. SRIDEVI SHANMUGAM (PHARMACY)
AUTHORS	SRIDEVI SHANMUGAM, S NIRENJEN, RUKAIAH FATMA BEGUM, N HARIKRISHNAN, ANKUL SINGH SURESH PRATAP SINGH.		
JOURNALNAME	CURRENT NUTRITION AND FOOD SCIENCE		
SNIP-0.276	IMPACTFACTOR-1.1	INDEXED-SCOPUS/WOS	

ABSTRACT:

Non-alcoholic fatty liver disease (NAFLD) is a prevalent liver condition associated with obesity, type 2 diabetes, and cardiovascular diseases. The rising global burden of NAFLD underscores the need for effective management strategies. This review examines the impact of dietary modifications and physical exercise on insulin sensitivity and overall metabolic health in NAFLD patients. The review synthesizes current evidence on the effectiveness of physical activity and diet in improving liver function and reducing hepatic fat accumulation. Increased physical activity, including both aerobic and resistance exercises, has been shown to significantly reduce hepatic fat and improve insulin sensitivity in individuals with NAFLD. Additionally, complementary dietary interventions, such as the Mediterranean-style diet, enhance these effects. The review further discusses the role of inflammation and oxidative stress in the progression of NAFLD and the importance of personalized lifestyle interventions. Effective management of NAFLD requires a multidisciplinary approach that incorporates lifestyle modifications, behavioural support, and emerging technologies for non-invasive diagnosis and disease monitoring. Future research should focus on personalized therapeutic strategies and the long-term sustainability of interventions to mitigate the global health impact of NAFLD.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION-JULY 2025

PAPERTITLE	MICROPLASTICS IN MUSCULOSKELETAL DISORDERS: AN EMERGING THREAT		 Dr MADHAN JEYARAMAN (ACSMCH)
AUTHORS	MADHAN JEYARAMAN, NAVEEN JEYARAMAN, ARULKUMAR NALLAKUMARASAMY, MAINAK ROY.		
JOURNALNAME	INDIAN JOURNAL OF ORTHOPEDICS		
SNIP-0.69	IMPACTFACTOR-1.1	INDEXED: SCOPUS/WOS	

ABSTRACT:

Microplastics (MPs), defined as plastic particles smaller than 5 mm, are emerging environmental contaminants that pose potential health risks. Although their systemic toxicity is increasingly recognized, the impact of MPs on the musculoskeletal system is underexplored. A narrative literature review was conducted using PubMed, Scopus, and Web of Science. Studies published from 2010 to 2024 were selected using the keywords ‘microplastics,’ ‘nano-plastics,’ ‘bone,’ ‘cartilage,’ ‘muscle,’ and ‘musculoskeletal system.’ Inclusion criteria encompassed original experimental studies, animal models, and clinical data where available. MPs can enter the body via ingestion, inhalation, and dermal absorption. Once inside, they trigger oxidative stress, inflammation, apoptosis, and cellular dysfunction in musculoskeletal tissues. MPs have been associated with disrupted osteoblast and chondrocyte function, increased osteoclastogenesis, and impaired muscle regeneration. Preclinical models indicate reduced bone density and muscle atrophy following chronic exposure. Nano-plastics may have distinct toxicokinetics with deeper tissue penetration and higher bioavailability. Current evidence suggests that MPs adversely affect musculoskeletal health through inflammation, oxidative damage, and cellular dysfunction. The findings, although predominantly preclinical, raise concerns about long-term skeletal and muscular degeneration. Further clinical studies are urgently needed.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	REVIEWING THE ROLE OF NANO-ALCCOFINE AND SUPERPLASTICIZERS IN ENHANCING MECHANICAL PROPERTIES OF RECYCLED CONCRETE		
AUTHORS	N NISHA, FELIX KALA THOMASMATHIYAS.		
JOURNALNAME	JOURNAL OF ENVIRONMENTAL NANOTECHNOLOGY		
SNIP-0.451	IMPACTFACTOR-0.7	INDEXED-WOS/SCOPUS	
			Ms. N. NISHA (CIVIL)

ABSTRACT:

India has a population of 1.4 billion, raising the question of how to accommodate this growing population within the available land area. Various construction projects are being carried out that contribute to the generation of significant amounts of demolition waste globally. Although the Bureau of Indian Standards allows the use of up to 25% recycled aggregates in concrete, research on the recycling and reuse of this debris has been limited. Recycling these materials to produce sustainable concrete is feasible. However, construction and demolition waste (CDW) often represents one of the most expensive types of waste to dispose of in landfills, a common practice in many countries. Moreover, there are very few regulations governing the reuse of this debris. Reusing CDW can significantly reduce the carbon footprint of the construction sector. This review paper summarizes the published literature of various researchers who have highlighted the importance of using CDW in concrete and examined various treatments that can enhance the fresh, mechanical, and durability properties of concrete. It also provides an overview of the use of nano Alccofine in concrete, explaining how it can be combined with supplementary cementations materials (SCM) to improve the alkali activation of demolition waste. Furthermore, the paper discusses the impact of superplasticizers on recycled demolition waste. The paper outlines potential future research directions regarding the use of CDW and ultrafine SCM to produce sustainable concrete.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	CEREBELLO-PONTINE ANGLE CYST CAUSING DEAFNESS IN AN ADOLESCENT MALE		Dr. RAMESH VARADHARAJAN (ACSMCH)
AUTHORS	RAMESH VARADHARAJAN		
JOURNALNAME	INDIAN JOURNAL OF OTOLARYNGOLOGY AND HEAD AND NECK SURGERY		
SNIP-0.475	IMPACTFACTOR-0.4	INDEXED-SCOPUS/WOS	

ABSTRACT:

This case study presents an adolescent male diagnosed with a cerebello-pontine angle cyst, a rare intracranial lesion affecting the region between the cerebellum and pons. The patient presented with progressive hearing loss, which significantly impacted daily communication and quality of life. Clinical evaluation, audiological assessment, and advanced neuroimaging techniques were utilized to identify the cyst and determine its relationship to the surrounding neural structures. The study highlights the importance of early diagnosis and timely intervention in managing cerebello-pontine angle lesions to prevent permanent neurological deficits. Appropriate treatment resulted in improved clinical outcomes and provided valuable insights into the diagnosis and management of rare causes of deafness in adolescents.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	INTERRELATIONSHIP BETWEEN ENDOTHELIAL NITRIC OXIDE SYNTHASE WITH SERUM NITRIC OXIDE AND ENDOTHELIN-1 LEVELS IN PREECLAMPTIC WOMEN		 Dr. PRIYADARSHINI KECHEGERE SIDDEGOWDA (RRMCH)
AUTHORS	PRIYADARSHINI KECHEEGERSIDDE GOWDA, GANESH M, SAI LAKSMI M P A, SHRUTHI GOWDA.		
JOURNALNAME	JOURNAL OF KRISHNA INSTITUTE OF MEDICAL SCIENCES UNIVERSITY		
SNIP-0.433	IMPACTFACTOR-0.2	INDEXED-WOS/SCOPUS	

ABSTRACT:

Background: Preeclampsia, a major hypertensive disorder of pregnancy, is presumed to be due to an imbalance between Nitric Oxide (NO) and Endothelin-1(ET-1). The serum ET-1 appears to have a positive correlation with the severity of preeclampsia. Endothelial Nitric Oxide Synthase (ENOS) activity appears to be significantly decreased in affected endothelial cells of preeclamptic women and thus NO levels. **Aims and Objectives:** To estimate serum eNOS levels, serum NO, and ET-1 levels in preeclamptic women and to determine the correlation between NOS with serum NO and ET-1 levels in preeclamptic women. **Materials and Methods:** An observational cross-sectional study was conducted after obtaining ethical clearance from the institutional ethics committee, with 40 normal pregnant and 40 pre-eclamptic women from the antenatal care unit. Blood samples collected from both groups were analyzed for levels of ET-1, eNOS, and NO, and a comparison was made. **Results:** A statistically significant difference was observed in the mean ET-1(pg/mL), NO-(umol/L), and eNOS (pg/mL) over groups. There was a significant positive correlation between eNOS (pg/mL) and NO (umol/L) among cases. **Conclusion:** Increased concentration of ET-1, reduction in NO, and eNOS in serum can be predictive factors of preeclampsia in the third trimester.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION-JULY 2025

PAPERTITLE	OCULAR DRUG DELIVERY SYSTEM: A NOVEL REVIEW WITH APPLICATIONS		 Dr. NAVKANTH RAJU RAMAYANAM (PHARMACY)
AUTHORS	SAROVAR REDDY V, BHAVYA BATHULA, A AVINASH, GOPINATH S, MERIGA PRAMOD KUMAR, NAVKANTH RAJU RAMAYANAM, ANITHA P, VASAVI DEVI D, PRASANTHI SAMATHOTI		
JOURNALNAME	ASIAN JOURNAL OF PHARMACEUTICS		
SNIP-NIL	IMPACTFACTOR-0.2	INDEXED-WOS	

ABSTRACT:

Many services have made the transition to the cloud because of the increased reliability and efficiency of cloud computing. Due to their capacity to ease service access while also securing communications in the public network, the three-factor Mutual Authentication and Key Agreement (MAKA) protocols are seeing increased use in multi-server designs. A lack of formal security proof or high communication and computation costs make the limited three-factor MAKA protocols that are currently available susceptible to a wide range of attacks. The proposed approach consists of three phases, which are preprocessing, feature selection, and model training. Text scheduling and normalization make up preprocessing. In feature selection, the PSO is an optimization method that uses a population-based approach to find optimal solutions. An ANN-SVM was employed throughout the model's training phase. With an average accuracy of 93.30%, the proposed technique surpasses ANN and SVM.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	The Peril of Macular Degeneration: A Challenge to Vision		 Dr. NITHYANISHA R (PHYSIOTHERAPY)
AUTHORS	Nithyanisha R, Shanthi Ramesh, Malathi Subramanian, Pichandy Muthuprasanna, Vinayak Babu Angadi.		
JOURNALNAME	Gazi Medical Journal		
SNIP-0.073	IMPACTFACTOR-0.1	INDEXED-WOS/SCOPUS	

ABSTRACT

Age-related macular degeneration (ARMD) significantly contributes to the prevalence of blindness on a global scale. ArMD has emerged as the third most prevalent cause of vision impairment worldwide, with the substantial increase in the elderly population. The key variables contributing to geographical atrophy (GA) and neovascular ArMD are ArMD, key forms of ArMD, both leading to significant vision impairment in older persons. GA is also known as late-stage macular degeneration. Cigarette smoking, dietary components, cardiovascular diseases, inherited markers, genes that control angiogenic pathways, lipids, and complement were shown to be important risk factors. In the last two decades, numerous studies have demonstrated that the percentage of macular degeneration cases has decreased. This may be attributed to the introduction of novel approaches to diagnosis and treatment. This review comprehensively explores ArMD, covering recent developments and classifications. It covers diagnosis methods, grading systems, and prevention strategies. It highlights advancements in treatment, including ankyrin repeat proteins, gene therapy via recombinant adeno-associated virus, and offers promising avenues for ArMD management.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JULY 2025

PAPERTITLE	ASSESSMENT OF AIRBORNE INFECTION CONTROL PRACTICES AT HEALTH CARE FACILITIES OF TUMKUR DISTRICT, KARNATAKA: A DESCRIPTIVE STUDY		Dr. CHANDANA KRISHNA KRISHNA (SLMCH)
AUTHORS	CHANDANA KRISHNA, MANOJ BABU, KRISHNA IYENGAR		
JOURNALNAME	INDIAN JOURNAL OF TUBERCULOSIS		
SNIP-0.618	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT:

Tuberculosis (TB) is a major health hazard in India and is one of the leading causes of death worldwide. Airborne transmission of infectious disease is a major public health concern. Adherence to the airborne infection control (AIC) is crucial to prevent the spread of TB among patients who visit health care facilities and among the health care staff. To assess the airborne infection control practices at health care facilities in Tumkur, this descriptive study was conducted in 85 public health institutes in 5 TB units of Tumkur. Data was collected using a pre-tested, semi-structured questionnaire through personal interview, verification of records, and inspection using the WHO checklist. The present study showed infection control committee and infection control plans were present in 97.65% and 90.5% respectively, and 9% clinical staff underwent periodic TBIC training in 91.76% of PHIs. Waiting area and sputum sample collection area were well-ventilated in 97.65% & 97.65% of PHIs. Health workers practiced hand hygiene in 90.59%, and PPEs were available in 85.06% PHIs. The study concludes that airborne infection control measures, which include administrative, environmental, and the use of personal protective equipment, were satisfactory among the PHIs, but there is still scope for improvement.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	ENGINEERING NANOFIBERS FOR CUTANEOUS DRUG DELIVERY SYSTEMS AND THERAPEUTIC APPLICATIONS		 Dr. SALEEM BASHA NAGOR GANI (PHARMACY)
AUTHORS	MADHULIKA PRADHAN, SALEEM BASHA NAGOR GANI, KANTROL KUMAR SAHU, KRISHNA YADAV, SUCHETA, AKHILESH DUBEY, HARE KRISHNA PRADHAN, JOHN KIRUBAKARAN		
JOURNALNAME	MEDICINE IN NOVEL TECHNOLOGY AND DEVICES		
SNIP-0.809	IMPACTFACTOR-NIL	INDEXED-WOS/SCOPUS	

ABSTRACT:

In the field of dermatological treatment and therapeutic innovation, nanofibers engineered through electrospinning technology have gained significant attention. These ultrafine structures replicate the natural framework of the extracellular environment, delivering exceptional breathability, malleability, and capacity to enhance cellular adhesion and tissue restoration. Scientists can precisely engineer these microscopic threads to administer pharmaceutical compounds with controlled release characteristics, rendering them particularly advantageous for addressing various skin conditions, including lesions, eczematous inflammation, scaly erythematous plaques, follicular eruptions, and cutaneous malignancies. Incorporating antimicrobial elements, such as particulate zinc compounds and graphene-derived sheets, can substantially improve their effectiveness in combating pathogenic invasion and accelerating dermal recovery. Furthermore, the electrospinning process facilitates the creation of multifunction-capable filaments with sophisticated attributes, including environment-sensitive drug release mechanisms that respond to skin surface acidity fluctuations, alongside diagnostic-therapeutic dual functionalities that permit continuous wound monitoring and assessment in clinical settings. Notwithstanding their remarkable promise, several hurdles persist in refining nanofiber architecture for bedside implementation, guaranteeing industrial-scale production capability, and executing thorough living organism investigations. This review examines cutting-edge developments in engineering nanofibers for cutaneous drug delivery systems and therapeutic applications and underscores their capacity to transform topical drug delivery systems, delivering personalized, effective, and precisely directed treatment options.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION-JULY 2025

PAPERTITLE	AUTOMATED MACHINE LEARNING MODEL IN SECURE DATA TRANSMISSION IN SUSTAINABLE HEALTHCARE SENSOR NETWORK USING QUANTUM BLOCKCHAIN ARCHITECTURE		
AUTHORS	KAAVYA KANAGARAJ, A SHERYL OLIVER, V P KAVITHA, S MAGESH, R MANIKANDAN		
JOURNALNAME	AUTOMATED MACHINE LEARNING AND INDUSTRIAL APPLICATIONS		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	Dr. S MAGESH (CSE)

ABSTRACT:

A body sensor network (BSN), a monitoring system used in healthcare settings based on Internet of Things (IoT) technology, consists of wearable or implanted devices. Due to the limited battery capacity and energy supply of sensors in BSN, extending the network's service cycle is a significant challenge. Increasing energy efficiency and energy collection are essential for the network to remain sustainable. Operators are looking to automate network diagnosis and management using machine learning (ML) to operate complex optical communication networks cost-effectively. This research proposes a novel, sustainable, network-secure data transmission technique based on automated machine learning (AutoML). Here, the healthcare network monitoring uses a Reinforcement Bayesian Regressive Vector Machine. The secure data transmission uses quantum blockchain and automated transfer machine graph learning. The experimental analysis of throughput, scalability, packet delivery ratio, and data integrity is carried out. New functionalities are needed to enable cognitive, autonomous management of optical network security to achieve these goals.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION-JULY 2025

PAPERTITLE	COBLATION ADENOIDECTOMY VERSUS CONVENTIONAL ADENOIDECTOMY: A COMPARATIVE STUDY OF TWO DIFFERENT TECHNIQUES OF ADENOIDECTOMY		Dr. DIANITTA DEVAPRIYA VERONICA JOSEPH (ACSMCH)
AUTHORS	DIANITTA DEVAPRIYA VERONICA JOSEPH, PRABHAKARAN JAMBUNATHAN.		
JOURNAL NAME	IRANIAN JOURNAL OF OTORHINOLARYNGOLOGY		
SNIP-0.591	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT:

Chronic nasal obstruction, frequent respiratory infections, recurrent ear blocks, earaches, and pediatric obstructive sleep apnea may indicate adenoid enlargement, one of the most common conditions encountered in pediatric otorhinolaryngology practice. Adenoidectomy is a simple procedure with certain limitations, which has led to various innovations in surgical techniques in the recent past. The study aimed to compare two different adenoidectomy techniques: the endoscopy-assisted coblation adenoidectomy and the conventional curettage adenoidectomy. In this prospective randomized interventional study involving 40 patients, 20 patients in Group A underwent curettage adenoidectomy, and 20 patients in Group B underwent endoscopic coblation adenoidectomy. Complete adenoid tissue removal, surgical blood loss, operative duration, postoperative pain, and recovery time are the outcome measures. Endoscopy-assisted coblation adenoidectomy enabled complete adenoid removal better than conventional adenoidectomy; 15 patients (75%) had complete removal versus 3 patients (15%) in the conventional group (p-value of 0.0003). The mean blood loss was 30 ± 5.60 mL in Group A and 10.75 ± 2.93 mL in Group B ($p = 0.0001$). The pain score assessed using the visual analog scale was 4 ± 0.44 in Group A and 3 ± 0.36 in Group B ($p = 0.0001$). The mean time taken for recovery in Group A was 3.14 ± 0.62 days, and that in Group B was 2.64 ± 0.64 days ($p = 0.001$). Coblation adenoidectomy under endoscopic guidance enabled complete adenoid removal, reduction in surgical blood loss and postoperative pain, and shortened recovery time.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	THE IMPACT OF SAFETY PRACTICES ON CONSTRUCTION EMPLOYEE PERFORMANCE		 Ms.S MADHUMITHA (FoMS)
AUTHORS	S MADHUMITHA, S. ASRAFI		
JOURNALNAME	INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCES (IND)		
SNIP-1.733	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT

Safety practices are essential for every organization's success, but it's particularly essential in highly competitive sectors like construction, which need a high level of consistency and commitment. Safety practices increase commitment to the company's goals, increase efficiency, and generate higher-quality work. The objective of this paper is to investigate the factors that affect safety practices, including Supervision & monitoring, Workplace reporting, Training programs, Safety regulation, PPE (Personal Protective Equipment), and how these factors affect workers' job performance. Questionnaires were used to gather data for the study, which focused on construction sector employees in Tiruvallur. The convenience sample method was used, and the sample size of the study was 117. The data was analyzed using SPSS software t-test, ANOVA, correlation coefficient, were used to analyse the data it is found that the factors of employee engagement has a positive Correlation among the variable it is also founded there is highly significant relationship between the safety practices and the employee performance it is suggested to provide a good Supervision & monitoring, Workplace reporting, Training programs, Safety regulation, PPE (Personal Protective Equipment) system can foster the positive work culture which makes the employee satisfied, enhances the trust among the employee which increase the employee performance toward the work.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	NAVIGATING THE LABYRINTH: A STUDY ON THE CHALLENGES AND MITIGATION STRATEGIES IN INTERNATIONAL RECRUITMENT IN THE IT SECTOR		
AUTHORS	MERLIN LILLY A, S. ASRAFI		
JOURNALNAME	INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCES (IND)		
SNIP-1.733	IMPACTFACTOR-NIL	INDEXED-SCOPUS	
			Ms.MERLIN LILLY (FoMS)

ABSTRACT

The information technology sector, distinguished by its swift technological progress and global interconnectedness, consistently experiences a high demand for skilled professionals. International recruitment has emerged as a pivotal strategy for organizations aiming to address talent shortages and acquire specialized expertise. Nevertheless, this process is accompanied by numerous challenges, including cultural disparities, immigration complexities, intense competition for talent, and diverse compensation expectations. This research paper investigates the intricate complexities associated with international IT recruitment, focusing on the primary challenges faced by both organizations and candidates. It evaluates the influence of factors such as visa regulations, language obstacles, cross-cultural communication, and the necessity for competitive compensation and benefits packages. Additionally, the study explores various mitigation strategies adopted by successful organizations to navigate these challenges. Such strategies encompass utilizing technology for remote onboarding and collaboration, collaborating with local recruitment agencies, establishing culturally sensitive recruitment practices, and providing comprehensive relocation assistance. By examining real-world examples and best practices, this paper aims to offer valuable insights and practical recommendations for organizations striving to effectively navigate the complex landscape of international IT recruitment. Ultimately, the research aspires to enhance the understanding of the challenges and solutions within this vital domain, facilitating organizations in the development of globally diverse and high-performing IT teams.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	LEVERAGING CELEBRITY INFLUENCE FOR ORAL CANCER PREVENTION AND SMOKELESS TOBACCO CESSATION: CHALLENGES AND OPPORTUNITIES IN INDIA		 Dr. HARINI ARUMUGASAMY (AHS)
AUTHORS	SARAVANAN SEKARAN, DHANRAJ GANAPATHY, DEEPAVALI ARUMUGANAINAR, HARINI ARUMUGASAMY, VIMALRAJ SELVARAJ, SAEED ALASSIRI, SHAHABE SAQUIB ABULLAIS		
JOURNALNAME	FRONTIERS IN PUBLIC HEALTH		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-WOS/SCOPUS	

ABSTRACT

India bears the highest global burden of oral cancer, with over 83,400 cases reported in 2022. The widespread use of smokeless tobacco and areca nut, particularly in rural and underserved communities, continues to drive this public health crisis. Despite government regulations and awareness campaigns, tobacco consumption remains high due to cultural acceptance, affordability, and accessibility of products like gutkha and khaini. This review examines the role of celebrity endorsements in tobacco cessation efforts, assessing their influence on public perception and behavior. Bollywood actors and sports icons, who hold immense cultural influence in India, have been leveraged in health campaigns to promote tobacco-free lifestyles. While some celebrity-driven initiatives have successfully raised awareness, surrogate marketing remains a critical challenge. Many celebrities indirectly endorse harmful products like pan masala and mouth fresheners, undermining tobacco control efforts. To counter this, stricter policies are needed to regulate celebrity endorsements, ensuring alignment with public health goals. This review highlights key strategies for maximizing the impact of celebrity-led health campaigns while minimizing the risks posed by surrogate marketing. By fostering sustained celebrity engagement and implementing robust policy measures, India can take significant steps toward reducing smokeless tobacco use and preventing oral cancer.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	Supply Chain Optimization-based Drug Polymer Analysis Using an AI Model for Synthesis and Characterization		
AUTHORS	Lubin Balasubramanian, G Balamurugan, Nagamany Abirami, U Muruganantham, S MAGESH, R Manikandan		
JOURNALNAME	Applications of Artificial Intelligence in Pharmaceuticals		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	
			Dr. S MAGESH (CSE)

ABSTRACT

Research on drug creation and development is crucial for chemical scientists and pharmaceutical businesses. On the other hand, drug design and discovery are hampered by limited efficacy, off-target effects, time-consuming processes, and high costs. Using the available three-dimensional structures, molecular docking can be utilized to anticipate the strength of the binding of small-molecule binders and their chemical derivatives to a macromolecular target. In the process of finding as well as developing new drugs, artificial intelligence and machine learning technologies are essential. This chapter proposes a novel technique in drug polymer-based synthesis and characterisation analysis with supply chain optimisation using artificial intelligence with a machine learning algorithm. Then, the supply chain optimisation is based on drug synthesis and structural analysis using a particle-adversarial reinforcement-Markov binary optimisation model. The experimental analysis has been carried out for various drug-polymer structure datasets in terms of prediction accuracy, random precision, and Recall.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	ANALYZING THE BIODEGRADATION OF CRUDE OIL THROUGH INDIGENOUS MICROBES: AN EXPERIMENT ON A LABORATORY SCALE	
AUTHORS	SUGANYA KALAIARASU, KOTTAI VEEDU J SHARMILA.	
JOURNALNAME	INDIAN JOURNAL OF ENVIRONMENTAL PROTECTION	
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS



Dr.SUGANYA
KAKAIARASU
(BIO-TECHNOLOGY)

ABSTRACT

This research focuses on experimenting with isolated microbes from oil-contaminated environments and evaluating their ability to analyze crude oil biodegradation activity on a laboratory scale using different medium sources. The indigenous microbes were cultured in a selective medium using crude oil and were identified using 16S rRNA sequencing obtained with *Bacillus subtilis* subsp. *Stercoris* and *Enterobacter ludwigii* strains. Furthermore, the growth of bacterial isolates was observed in seawater. Seawater contained Luria-Bertani (LB) medium and Bushnell Haas (BH) medium. A combination of LB and BH medium was cultured with crude oil for 7 days at 37°C in a rotary shaker (120 rpm) and assessed for growth kinetics to evaluate their stability and degradation of crude oil. The results revealed that the microbes in the LB-BH medium had better nutrient availability and oil-degrading capabilities, which led to the next steps in the deterioration process. GCMS studies were used to evaluate the degraded crude oil residues. The data revealed that the microbes utilized the provided medium sources, and 51.89% degradation of crude oil was detected in the experiment.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	EXO NATURAL LANGUAGE PROCESSING FOR NEXT-WORD PREDICTION THROUGH INNOVATIVE MACHINE LEARNING PARADIGMS		 Ms.V KAVIYA (IT)
AUTHORS	V KAVIYA, C ESURU POOJA, V RAMASAMY.		
JOURNALNAME	AIP CONFERENCE PROCEEDINGS		
SNIP-0.204	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT:

The field of machine learning research has come to rely heavily on Natural Language Processing (NLP) in order to help computers comprehend and interpret human language. With this project, we present a Next Word Prediction system that utilizes cutting-edge NLP methods. The main goal of the system is to improve typing experiences for users by offering contextually aware word suggestions in real-time while users produce text. The system's goals are to decrease errors, increase typing productivity, and provide a consistent writing experience across several digital platforms by utilizing advanced language models and understanding the complete context of the input text. The system comprises essential elements such as input processing, language modeling, adaptability and learning, user interface integration, security and privacy protocols, support for several languages, and performance optimization. Preparing input text for analysis by capturing and preparing it, the Input Processing module acts as the entry point for user interactions. The Language Model module, which creates contextually relevant predictions for the next word in real-time using sophisticated natural language processing algorithms, is the brain behind the system. The Privacy and Security module addresses privacy and security concerns by putting steps in place to safeguard user data and guarantee secure processing. By offering reliable performance in a variety of languages and multilingual contexts, the Multilingual Support module expands the system's applicability. All things considered, the Next Word Prediction system offers users a clever and natural typing experience, marking a substantial leap in text input technology. The system's utilization of natural language processing (NLP) not only enhances efficiency and communication but also lays the groundwork for upcoming developments in intelligent text help.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	Financial Risk Prediction with Banking Monitoring for Cyber Security Analysis Using Automated Machine Learning		
AUTHORS	K Rajkumar, Prassanna Jayachandran, Kannan Chakrapani M, S MAGESH, R Manikandan		
JOURNALNAME	Automated Machine Learning and Industrial Applications		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	
			Dr. S MAGESH (CSE)

ABSTRACT:

Science and technological advancements encourage ongoing improvements in consumer finance, but they also introduce some financial credit hazards. Financial credit risk is getting harder and harder to manage, especially with the ongoing expansion of Internet banking. This highlights the need for the creation and assessment of a unique, all-encompassing machine learning approach that incorporates the study of missing data and predictor evaluation into the distress prediction process. This research proposes a novel technique in financial risk prediction with banking monitoring for cyber security detection using federated learning and automated machine learning. Here, users' banking is analyzed for cyber security detection using Gaussian Encoder Belief Network (GEBN). Financial credit risk analysis is conducted using metaheuristic autoregressive kernel principal swarm optimization model (MAPSO). The experimental analysis evaluates accuracy, mean average precision, recall, F-measure, and normalized error. Data from specific examples are used to analyze the model's performance. The findings imply that the suggested model-based data mining technique may extract hidden information from the data while optimizing input variables.



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Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	An improved U-NET3+ with transformer and adaptive attention map for lung segmentation		Mr. V JOSEPH RAJ (CSE)
AUTHORS	V Joseph Raj, P Christopher.		
JOURNALNAME	Journal of X-Ray Science and Technology		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-WOS/SCOPUS	

ABSTRACT:

Accurate segmentation of lung regions from CT scan images is critical for diagnosing and monitoring respiratory diseases. This study introduces a novel hybrid architecture, Adaptive Attention U-NetAA, which combines the strengths of U-Net3+ and Transformer-based attention mechanisms models for high-precision lung segmentation. The U-Net3+ module effectively segments the lung region by leveraging its deep convolutional network with nested skip connections, ensuring rich multi-scale feature extraction. A key innovation is introducing an adaptive attention mechanism within the Transformer module, which dynamically adjusts the focus on critical regions in the image based on local and global contextual relationships. This model's adaptive attention mechanism addresses variations in lung morphology, image artifacts, and low-contrast regions, leading to improved segmentation accuracy. The combined convolutional and attention-based architecture enhances robustness and precision. Experimental results on benchmark CT datasets demonstrate that the proposed model achieves an IoU of 0.984, a Dice coefficient of 0.989, a MIoU of 0.972, and an HD95 of 1.22 mm, surpassing state-of-the-art methods. These results establish U-NetAA as a superior tool for clinical lung segmentation, with enhanced accuracy, sensitivity, and generalization capability.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JULY 2025

PAPERTITLE	ASCON-MNASNET: AN EFFECTIVE DATA PRIVACY AND SECURITY FRAMEWORK IN CLOUD ENVIRONMENT		 Mr. JAYAPRAKASH JAYA CHANDRAN (IT)
AUTHORS	JAYAPRAKASH JAYACHANDRAN, DAHLIA SAM, KANYA NATARAJ.		
JOURNALNAME	TRANSACTIONS ON EMERGING TELECOMMUNICATIONS TECHNOLOGIES		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS/WOS	

ABSTRACT:

As cloud computing continues to proliferate, users are becoming more concerned about the security and privacy of their data, particularly in light of the growing incidences and complexity of cyberattacks. Therefore, it has become imperative for both individuals and organizations to implement a privacy-preserving intrusion detection system (IDS) to secure the data and detect intrusions. Previously available methods are often inadequate, as they may not effectively balance the need for robust security with the preservation of user privacy, leading to potential vulnerabilities and a lack of trust among clients. To overcome these obstacles, this article introduces CryptoIDS, a novel privacy-preserving IDS that closely combines deep learning-based attack detection with lightweight cryptography. To protect cloud data privacy, CryptoIDS specifically uses a lightweight encryption technique based on ASCON and a CondenseNet-MNasNet hybrid deep learning model for precise and rapid intrusion detection. The framework was thoroughly tested on three benchmark datasets: Cleveland (for privacy evaluation), BoT-IoT and IoT-23 (for security evaluation). Experimental results show that CryptoIDS obtained high detection accuracies of 99.67% on the BoT-IoT dataset and 99.45% on the IoT-23 dataset and improved encryption performance by over 13.89% when compared to current cryptographic algorithms. These findings establish CryptoIDS as a highly effective solution for enhancing both data security and privacy protection in cloud environments.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	INTRA-ARTICULAR HYALURONIC ACID INJECTIONS MAY BE BENEFICIAL IN PATIENTS WITH LESS ADVANCED KNEE OSTEOARTHRITIS: A SYSTEMATIC REVIEW OF RANDOMIZED CONTROLLED TRIALS		 Dr.NAVEEN JEYARAMAN (SLMCH)
AUTHORS	FILIPPO MIGLIORINI, NICOLA MAFFULLI, FRANCESCO SIMEONE, NAVEEN JEYARAMAN, SWAMINATHAN RAMASUBRAMANIAN, MADHAN JEYARAMAN.		
JOURNALNAME	SPORTS MEDICINE		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS/WOS	

ABSTRACT:

Knee osteoarthritis is a degenerative joint disease that impairs quality of life. Hyaluronic acid (HA) injections are used to restore synovial fluid viscosity and improve joint function. The present systematic review investigated the prognostic factors influencing the effect of intra-articular HA injections for knee osteoarthritis (OA). The endpoint of interest was whether patient characteristics and molecular weight of the HA influence patient-reported outcome measures (PROMs) at different follow-ups. This study was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses: the 2020 PRISMA statement. All randomised controlled trials (RCTs) investigating the efficacy of intra-articular HA injections in the knee were accessed. Data concerning the visual analogue scale (VAS), Western Ontario and McMaster Universities Arthritis Index (WOMAC), and Lequesne scales were collected at baseline and the last follow-up. OA was scored using the Kellgren–Lawrence (KL) classification. The endpoint of interest was whether patient characteristics and the molecular weight of HA influence clinical outcomes. The study included 71 RCTs and data from 10,590 patients; 67% (7082 of 10,570) were women. The mean age of the patients was 61.8 ± 5.1 years, and the mean body mass index (BMI) was 27.8 ± 2.3 kg/m².

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPER TITLE	GREEN SYNTHESIS OF TERMINALIA ARJUNA-MEDIATED ZINC OXIDE NANOGEL FOR ENHANCED WOUND HEALING—AN IN VITRO STUDY		
AUTHORS	VIJAYALAKSHMI RAJARAM, AMBALAVANAN NAMASIVAYAM, RAJESHKUMAR SHANMUGAM, JAIDEEP MAHENDRA, UMA SUDHAKAR, DEVI PARAMESWARI BALAKRISHNAN		
JOURNAL NAME	WORLD JOURNAL OF DENTISTRY		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	
			Dr. UMA SUDHAKAR (TMDCH)

ABSTRACT

This study aims to synthesize zinc oxide nanoparticles (ZnONPs) via green synthesis using Terminalia arjuna, formulate a ZnONP-based gel, and evaluate its physicochemical properties and wound healing potential for applications in nanomedicine and wound care. Materials and methods: T. arjuna-mediated ZnONPs (T. arjuna ZnONPs) were synthesized via a green synthesis approach, followed by characterization using X-ray diffraction (XRD), Fourier-transform infrared (FTIR) spectroscopy, and scanning electron microscopy (SEM). The XRD analysis was used to determine crystallite size, and FTIR identified functional groups. SEM provided morphological insights. A nanocomposite gel incorporating T. arjuna ZnONPs was formulated, and its viscosity and pH were measured. Biocompatibility was assessed via an MTT assay on human periodontal ligament fibroblast cells, with concentrations ranging from 100 to 600 µg/mL over 24 and 48 hours. A scratch wound healing assay evaluated the nanogel's effect on cell migration. Results: XRD analysis revealed a crystallite size of 35 nm for T. arjuna ZnO NPs. FTIR confirmed Zn-O bonding along with hydroxyl, carbonyl, and amine groups. SEM images showed a rod-shaped nanoaggregate morphology. The T. arjuna ZnONPs gel exhibited a viscosity higher than the control (flow time: 1 min 30 sec vs 30 sec) and a pH of 6.11. MTT assay results showed 100% cell viability up to 300 µg/mL, with dose-dependent reductions at higher concentrations. At 400 µg/mL, cells displayed enhanced motility. The wound healing assay indicated significant cell migration in the ZnONPs-treated group compared to the control, suggesting enhanced wound closure potential. Conclusion: The study successfully achieved its aim by providing a comprehensive exploration of ZnONPs synthesis and gel formulation. The observed effects on cellular processes and wound healing underscore the significant promise of T. arjuna ZnONPs nanogel as a therapeutic antibacterial platform. Clinical significance: These multidimensional insights into the synthesis, morphology, and biological impact of T. arjuna ZnONPs nanogel as a potential candidate for innovative biomedical applications, particularly in addressing periodontitis, as a local drug delivery agent.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	AN INVESTIGATION ON CERVICAL CANCER DRUGS THROUGH THE QSPR MODEL EMPLOYING DEGREE-RELATED TOPOLOGICAL INDICES		
AUTHORS	PRIYADARSHINI S, KOPPERUNDEVI SIVARAJAN.		
JOURNALNAME	INTERNATIONAL JOURNAL OF APPLIED PHARMACEUTICS		
SNIP-0.441	IMPACTFACTOR-NIL	INDEXED-SCOPUS	
			Ms. PRIYADARSHINI. S (MATHEMATICS)

ABSTRACT

To explore the relationship between topological indices and physical properties of the drugs administered for the treatment of cervical cancer using Quantitative Structure–Property Relationship (QSPR) modelling. The present study hopes to determine whether mathematical descriptors of drug molecules can predict physical properties without needing laboratory testing. Topological index, used as a molecular descriptor, was employed to describe the molecular structure of gemcitabine, vinblastine, irinotecan, and topotecan, among other cervical cancer drugs. QSPR was just about to find a mathematical relationship between their molecular descriptors and the physical properties like boiling point, molar refractivity, and flash point. Topological Indices: Nine topological indices were used for the molecular structure analysis of each drug. The correlation coefficients and *p-values were calculated to test the significance of these relationships statistically. The statistical analysis defined the relationships between topological indices and physical properties to be statistically significant when the correlation coefficient referred to was more than 0.7, with a *p-value of less than 0.05. The conditions for the results of this study were satisfied, thus ensuring strong and meaningful correlations. Conclusion: The study shows that topological indices can be effectively incorporated into QSPR modelling to predict the physical properties of drugs against cervical cancer. If provided with mathematical tools, chemists and medical practitioners may find it useful for drug design and development, thereby decreasing the dependence on long-duration, tedious, and expensive laboratory experiments.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	PRECISION AGRICULTURE: MACHINE LEARNING-BASED WEATHER PREDICTION – A COMPARATIVE STUDY OF ADABOOST AND MODIFIED ADABOOST ALGORITHM	
AUTHORS	LAVANYA A, SWAPNA B.	
JOURNALNAME	INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATION ENGINEERING	
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS



Ms.LAVANYA. A
(ECE)

ABSTRACT

Optimal crop growth through irrigation is achieved through the intelligent use of ensemble algorithms in predictive modelling, which depend on the massive amounts of information gathered and transmitted by various electronic devices and sensors pertaining to the crop's environment, well-being, and soil quality. Existing system: In traditional farming practices, the monitoring of environmental factors and soil conditions is often manual, resulting in delayed responses to potential issues, such as nutrient imbalances, water stress, or suboptimal climatic conditions. The delayed response in decision-making can result in decreased crop yield, inefficient resource use, and increased production costs. Many farmers rely on intuition or historical data, which do not account for the dynamic changes in the farm environment. As a result, there is an urgent need for systems that can offer real-time, data-driven insights into key environmental factors that influence crop health. Proposed system: This study presents an innovative framework of ML aimed at optimizing environmental management through continuous surveillance of essential weather parameters like temperature, air pressure, wind speed, and humidity to predict the future temperature with the Internet of Things. The objective of this article is to present the prediction of weather parameters through Adaboost and Modified Adaboost models, and to compare their performance indicators. Weather prediction with a modified Adaboost technique achieves an accuracy of 94%. By integrating these technologies, farmers can improve their farms' output and sustainability. They will also receive helpful information and be able to make informed decisions about irrigation and fertilization.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	SOFTWARE-BASED TIMETABLE CREATION USING GENETIC ALGORITHM		Mr. N CHANDRA SEKHAR REDDY (CSE)
AUTHORS	V AJAY KUMAR, A NAGA VASANTHA RAO, T SRIDHAR REDDY, M NISHANTH, N CHANDRA SEKHAR REDDY.		
JOURNALNAME	LECTURE NOTES IN NETWORKS AND SYSTEMS		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-NIL	

ABSTRACT

Designing timetables is very important everywhere. Making timetables for every section is very difficult for a person. So, in this application, we need to create a timetable that can automatically generate schedules based on the available time slots of faculty members and the subjects they are teaching. This paper aims to make the process of creating a timetable much better, quicker, and absence of overlapping. Through the utilization of problem-solving techniques that consider constraints, along with the implementation of genetic algorithms tailored to meet specific requirements and limitations. The main purpose of using a genetic algorithm (GA) and constraint satisfaction problem (CSP) is to identify the strengths of each method and mitigate their respective weaknesses, leading to more effective and efficient timetable generation.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	TUBERCULOSIS OF THE BREAST IN A NULLIPAROUS IMMUNOCOMPETENT INDIAN FEMALE WITHOUT PULMONARY INVOLVEMENT: A RARE REPORT		 Dr.MADHAN JEYARAMAN (ACSMCH)
AUTHORS	SANKALP YADAV, AMRUTA NADAR, MADHAN JEYARAMAN, GAUTAM RAWA, NAVEEN JEYARAMAN.		
JOURNALNAME	IP INDIAN JOURNAL OF IMMUNOLOGY AND RESPIRATORY MEDICINE		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT

Tuberculosis is commonly seen in developing nations. However, extrapulmonary presentations of this disease are comparatively fewer, and isolated cases of tuberculosis localized to the breast are even rarer. Herein, a case of an immunocompetent Indian female is presented; she came with complaints of a localized right breast swelling with tenderness, which was diagnosed after a detailed clinical and lab workup as tuberculosis of the breast. She was initiated on the appropriate antituberculous treatment per the national policy.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	EXPLORING POSSIBLE HUB GENES OF METABOLIC SYNDROME AND TYPE 2 DIABETES MELLITUS: A SYSTEMATIC NETWORK BIOLOGY STUDY		 Dr. SREYA KOSANAM (PHARMACY)
AUTHORS	ASHISH RUNTHALA, SRINIVASA VULICHI R, SREYA KOSANAM, RAJESHWARI PASUPULA, KAKARLA RAMAKRISHNA, MONOJ SUTRADHAR, KUMAR PRANAV NARAYAN		
JOURNALNAME	SCIENTIFIC REPORTS		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS/WOS	

ABSTRACT:

Metabolic syndrome (MetS) and Type-2 diabetes mellitus (T2DM), often termed “glucolipotoxicity” or insulin resistance syndrome, are complex metabolic disorders typically managed by lifestyle interventions and oral hypoglycemic agents. While conventional drugs, including metformin, sulfonylureas, and sodium-glucose cotransporter-2 (SGLT2) inhibitors, show efficacy, they also present risks such as hypoglycemia and weight gain. Among these, metformin remains the preferred first-line treatment due to its safety, low cost, and minimal side effects. However, the multifactorial nature of MetS/T2DM, coupled with increased cardiovascular risk, demands novel therapeutic strategies targeting broader disease-specific mediators. This study employs network pharmacology to identify potential gene targets linked to MetS/T2DM. We constructed a protein-protein interaction (PPI) network of 97 genes involved in the pathophysiology of these disorders, identifying 89 interlinked genes. The top 10 crucial genes including insulin receptor substrate 1 (IRS1), and interleukin-6 (IL6) are highlighted as key contributors to disease progression. Gene Ontology (GO) analysis revealed their involvement in essential biological processes like peptide synthesis, lipid regulation, and glucose homeostasis. Interestingly, nine of these genes are influenced by metformin, suggesting its broader mechanism in modulating metabolic pathways. Additionally, scrutiny of transcription factors for the considered dataset shows that forkhead box protein O1 (FOXO1), sirtuin 1 (SIRT1), and peroxisome proliferator-activated receptor gamma coactivator 1-alpha (PGC1α) play crucial roles in insulin signalling, mitochondrial function, and glucose metabolism, further elucidating the molecular complexity of T2DM. Through a network biology framework, this study attempts to highlight the potential for prospective multi-targeting therapeutic strategies that may exhibit improved efficacy and safety, for the management of MetS/T2DM.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	ADVANCES IN NANOPARTICLE-BASED DOXORUBICIN DELIVERY: PRECISION STRATEGIES FOR TARGETED TREATMENT OF TRIPLE-NEGATIVE BREAST CANCER		Dr. RAMAYANAM NAVAKANTH RAJU (PHARMACY)
AUTHORS	RAMAYANAM NAVAKANTH RAJU, SARAD PAWAR NAIK BUKKE, MURALI KRISHNA MOKA, HIMANSHU DEHINGIA, ADITYA BORDOLOI, RIYA DEBBARMA, PURUSHOTHAMA REDDY KUDUMULA, BALAKRISHNA VUYYALA, P DHARANI PRASAD, AKUGIZIBWE CATHERINE		
JOURNALNAME	DISCOVER NANO		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS/WOS	

ABSTRACT:

Triple-negative breast cancer (TNBC) is a prevalent and aggressive subtype of breast cancer, accounting for approximately 10–15% of all cases. Its lack of hormone receptors and poor clinical prognosis make targeted therapy particularly challenging, leaving chemotherapy as the mainstay of treatment. However, conventional chemotherapy is associated with significant limitations, including cardiotoxicity and inadequate tumor cell specificity. Nanoparticle-based drug delivery systems have emerged as a promising strategy for enhancing the therapeutic efficacy of doxorubicin (DOX) in TNBC. Among these, cell membrane-coated nanoparticles, exosome-sheathed porous silica nanoparticles, and FZD7-targeted nanoparticles have demonstrated substantial potential. These platforms improve drug delivery efficiency while minimizing systemic toxicity and adverse effects. Cell membrane-coated nanoparticles evade immune surveillance, allowing for selective targeting of TNBC cells. Exosome-sheathed nanoparticles facilitate the co-delivery of DOX with other therapeutic agents aimed at inhibiting cancer stem cell-driven epithelial-to-mesenchymal transition. FZD7-targeted nanoparticles enhance DOX accumulation within tumor cells by binding specifically to FZD7 receptors, leading to increased apoptosis and reduced cancer cell metabolic activity. This review aims to examine recent advancements in nanoparticle-based delivery systems for DOX in the treatment of TNBC. It further explores various formulations—including liposomes and polymeric nanoparticles—used for DOX delivery, assesses active and passive targeting strategies, and evaluates the advantages of controlled drug release. The review also identifies current gaps in the literature and proposes future research directions to advance the clinical applicability of these systems. Emerging concepts such as the active transport and retention mechanism and macrophage-mediated delivery systems offer new opportunities to improve tumor localization and retention of DOX-loaded nanoparticles. Collectively, these developments underscore the transformative potential of nanoparticle-based DOX delivery in revolutionizing TNBC therapy.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	PHYTOCHEMICALS AND ANTI-CANCER POTENTIAL OF LILIACEAE MEDICINAL PLANTS: A COMPREHENSIVE REVIEW		Dr. RAMAYANAM NAVAKANTH RAJU (PHARMACY)
AUTHORS	HARSHITHA KANCHARLA, RAMAYANAM NAVAKANTH RAJU, USHA RANI EATAKOTA, DURGA GANESH JAMI, PRASANTHI SAMATHOTI		
JOURNALNAME	ASIAN JOURNAL OF GREEN CHEMISTRY		
SNIP-0.765	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT:

The Liliaceae family includes various medicinal plants recognized for their significant pharmacological attributes. The study examines the anti-cancer properties of prominent species from the Liliaceae family, including *Allium sativum*, *Aloe barbadensis*, *Asparagus racemosus*, *Allium cepa*, *Bessera elegans*, *Colchicum autumnale*, *Fritillaria thunbergii*, *Lilium candidum*, and *Smilax glabra*. These plants are rich in bioactive phytochemicals, such as flavonoids, alkaloids, glycosides, and organosulfur compounds, as well as carotenoids, lectins, and phenolic acids. These phytochemicals have the potential to prevent cancer through mechanisms such as cell cycle halting, cell death induction, angioplasty suppression, and signaling pathway regulation. Through an examination of recent developments in phytochemical studies and preclinical and clinical research, this study highlights the therapeutic benefits and promise of these plants in the treatment of cancer. The Liliaceae family has several uses in both traditional and contemporary medicine, which emphasizes their value as a source for developing novel anti-cancer drugs. This review aims to clarify the anti-cancer properties of plants in the Liliaceae family and encourage further study in this area

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	GC-MS PROFILING AND ANTICANCER EVALUATION OF ETHANOLIC EXTRACT OF ANNONA SQUAMOSA FLOWER ON CERVICAL CANCER CELLS		
AUTHORS	SINDHU GOVINDARAJ, GOMATHI KANNAYIRAM, GNANA MOORTHY KUMARAN, SUDHA V, KOWSALYA RAJENDRAN		
JOURNALNAME	JOURNAL OF MOLECULAR SCIENCE		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	Ms.SINDHU GOVINDARAJ (BIO-TECHNOLOGY)

ABSTRACT:

Natural plant extracts are rich sources of bioactive compounds with potential therapeutic properties. *Annona squamosa*, traditionally known for its medicinal value, was investigated for its anticancer activity using ethanolic flower extract. To identify the phytochemical constituents of *Annona squamosa* flower extract using GC-MS and evaluate its cytotoxic, apoptotic, and anti-migratory effects on human cervical cancer (SiHa) cells. Methods: The ethanolic extract of *Annona squamosa* flower was subjected to GC-MS analysis to identify major phytochemicals. Cytotoxicity was assessed using the MTT assay. Morphological changes were observed via phase-contrast microscopy. Apoptosis was confirmed through ethidium bromide staining and RT-PCR for apoptotic gene expression. A scratch wound assay was conducted to evaluate the anti-migratory effect of the extract. GC-MS analysis revealed 20 bioactive compounds, including 4H-Pyran-4-one, Germacrene D, γ -Elemene, and Palmitic acid with known therapeutic properties. The extract showed dose-dependent cytotoxicity with significant morphological changes indicating apoptosis. Ethidium bromide staining confirmed nuclear condensation, and RT-PCR demonstrated upregulation of apoptosis-related genes. The wound healing assay indicated reduced cell migration in treated cells. The ethanolic extract of *Annona squamosa* flower possesses significant anticancer potential through its ability to induce apoptosis and inhibit cell migration. This extract could serve as a promising candidate for cervical cancer therapy after further validation.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	EPIDERMAL GROWTH FACTOR RECEPTOR AND PHOSPHODIESTERASE-4 AS THERAPEUTIC TARGETS IN ALLERGIC RHINITIS: A MOLECULAR DOCKING INVESTIGATION OF FLUTICASONE FUROATE AND AZELASTINE HYDROCHLORIDE		 Dr.A. SUMITHA (ACSMCH)
AUTHORS	SUMITHA ARUMUGAM, KARTHIK V P, PURUSHOTHAMAN S, PUGAZHENDHI S		
JOURNALNAME	ASIAN JOURNAL OF PHARMACEUTICAL AND CLINICAL RESEARCH		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT:

Allergic rhinitis is an immunoglobulin E-mediated reaction in the nasal mucosa to inhaled allergens, which affects the quality of life of people. Existing therapies provide inadequate symptom control, which drives investigation of targets in allergic rhinitis, such as epidermal growth factor receptor (EGFR) and phosphodiesterase-4 (PDE-4). Targeting EGFR reduces mucus hypersecretion, epithelial-driven inflammation, and alleviates allergic rhinitis symptoms. PDE-4 inhibitors suppress allergic inflammation. Hence, in this study, we employed docking to study the interactions of fluticasone furoate and azelastine hydrochloride against EGFR and PDE-4. Molecular docking was performed using AutoDock Tools 1.5.7 and Molegro molecular viewer. Ligands were optimized using the Merck molecular force field 94 force field. EGFR (Protein Data Bank [PDB] ID: 3POZ) and PDE-4 (PDB ID: 4NW7) structures were retrieved from the PDB. Grid box dimensions were set to 60×60×60 Å, spacing at 0.375 Å, and exhaustiveness was set at 8. Redocking of TAK-285 with EGFR was done to validate the docking protocol. Interactions were analyzed using Discovery Studio Visualizer. Fluticasone furoate showed stronger binding affinities to EGFR (−9.24 kcal/mol) and PDE-4 (−9.27 kcal/mol) compared to azelastine hydrochloride (−7.15 and −9.23 kcal/mol, respectively). It formed hydrogen bonds and hydrophobic interactions with key residues in both proteins. In contrast, azelastine exhibited fewer interactions. Redocking of TAK-285 confirmed the docking protocol with root mean square deviation <2.0 Å. Fluticasone furoate demonstrates greater potential to inhibit EGFR and PDE-4, which are pivotal in allergic rhinitis treatment. These study results need further experimental and clinical validation for use in allergic rhinitis patients.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	PLANT DISEASE IDENTIFICATION AND PESTICIDES SUGGESTION USING DEEP LEARNING		
AUTHORS	B SWAPNA, G CHAITANYA GOWD, G CHIRANJEEVI, S DEEPA, D SENTHIL KUMAR, ANANDHI SATHYA MOORTHY		
JOURNALNAME	POWERING E-COLLABORATION THROUGH AI, MACHINE LEARNING, AND INTERNET OF THINGS		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	
			Dr.B SWAPNA (ECE)

ABSTRACT:

Plant health management is vital for maximizing crop yields. However, traditional methods of identifying plant diseases and suggesting appropriate Pesticides are often labour-intensive, time-consuming, and prone to human error. It proposes an automated system that utilizes drones equipped with advanced imaging sensors and recommends suitable Pesticides based on real-time data. The drone captures high-resolution images of crops and analyses them using image processing techniques to identify symptoms of various plant diseases. By employing deep learning models trained on large datasets of diseased and healthy plant images, the system can classify the type and severity of the disease. Simultaneously, soil health data and environmental conditions are considered to suggest an optimal fertilizer plan for the affected area. This system provides several benefits, including faster disease detection, precise identification, reduced labour costs, and increased efficiency in pesticide usage. It enables farmers to take timely and accurate actions, resulting in improved crop health and productivity

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	COMPARING PROGRESSIVE MUSCLE RELAXATION AND NEURAL MOBILIZATION FOR TENSION-TYPE HEADACHES: A RANDOMIZED COMPARATIVE STUDY ON PAIN AND STRESS REDUCTION		
AUTHORS	KAMATCHI K, BHUVANA KUMAR, KAVIRAJA NATARAJAN, TANYA BERNADITE AROKIARAJ		
JOURNALNAME	BIOMEDICAL AND PHARMACOLOGY JOURNAL		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	
			Dr. KAMATCHI K (PHYSIOTHERAPY)

ABSTRACT:

The study aims to compare the effectiveness of the progressive muscle relaxation (PMR) exercise versus neural mobilization on tension-type headaches. Tension-type headache (TTH) is the most prevalent kind of primary headache. These headaches occur in 35-78% of the population. About 44 percent of patients suffering from TTH have demonstrated restricted ability to function, resulting in disability and a lower quality of life, according to the worldwide categorization. Therefore, this research aimed to compare the impact of neural mobilization with PMR for patients suffering from TTH. This study is a pre-post comparative experimental study, and the study duration is about 6 months; the treatment duration is about 6 sessions per week for 8 weeks. The study setting was the ACS Medical College and Hospital campus. For the study size, there were 40 subjects recruited; the study sampling is random. Sampling method: Subjects were assessed for inclusion criteria of age group between 19 and 25 years; both males and females were included; clinical diagnosis of tension headache; and exclusion criteria of other types/causes of headache, stroke, brain tumor, and meningitis. The Lakaev Academic Stress Response Scale-2 (LASRS-2) and Headache Impact Test-6 (HIT-6) were taken as outcome measures. 40 patients who fulfilled the criteria were selected based on the simple random sampling method. Of the 40 patients, 20 individuals will be allotted to group A, and the remaining 20 individuals will be allotted to group B. Interventions were given for 6 sessions per week for 8 weeks. Group A received progressive muscle relaxation exercises, while Group B received neural mobilization. When comparing the LASRS-2 along with HIT-6 scores of Groups A and B before and after the test, there is a significant variance in mean values at $P \leq 0.05$. The Lakaev Academic Stress Response Scale-2 (LASRS-2) is a 26-item self-rated questionnaire used to measure academic stress response across four domains: affective, behavioural, cognitive, and physiological, with higher scores indicating greater academic stress. The Headache Impact Test-6 (HIT-6) assesses the impact of headaches on daily life, with a total score ranging from 36 to 78, where higher scores indicate greater impact. The HIT-6 score is categorized into four levels: little or no impact (≤ 49), some impact (50-55), substantial impact (56-59), and severe impact (60-78). The research's conclusion is that PMR technique has a great role in reducing pain intensity and stress levels and improving quality of life for tension headaches when compared to neural mobilization.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	ANALYSIS OF DESIGN FEATURES FOR INSPECTION ROBOT MAKE USE OF CONCRETE STRUCTURES - AN ASSESSMENT		 Dr.JAYAPRAKASH JEYARAJU (MECH)
AUTHORS	N MANIKANDA PRABU, JAYAPRAKASH JEYARAJU		
JOURNALNAME	INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH IN AFRICA		
SNIP-0.399	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT:

The presence of robots across all engineering industries and commercial applications is growing rapidly day by day. Considering this, there is a need to implement robotic principles that are not directly applicable to human beings. One of the essential areas that leads to complications is the maintenance and inspection of large vertical structures with autonomous systems; still, it is an unsolved problem for the people doing research on this area. It is a challenge for mobile robots to climb a vertical wall primarily due to requirements for reliable locomotion, high maneuverability, and robust and efficient attachment and detachment. A large number of different robots exist that are able to navigate on buildings, ship hulls, or other human-made structures, but most of these systems are practically limited to special situations or applications. It may be due to the design or physical factor that has been considered during the design of the robotic system. While considering these issues, a lot of researches state various principles and design aspects for maintenance and inspection purposes. Based on these facts, this article discusses the different methods for climbing robots and points out specifically the recent adhesion method for concrete vertical wall climbing. It also discusses the design characteristics, practical challenges against the execution on vertical structures, and suitable valid fields.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JULY 2025

PAPERTITLE	ENHANCEMENT OF MOBILITY OF A TRACKED ARMORED FIGHTING VEHICLE BY INTRODUCING AN AUTOMATIC TRACK TENSIONER		
AUTHORS	VIJAYAKUMAR K R, KAVIVALLUVAN V, SAYAAN BANERJEE, RAJESH KUMAR J		
JOURNALNAME	INTERNATIONAL RESEARCH JOURNAL OF MULTIDISCIPLINARY TECHNOVATION		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	
			Dr.VIJIYAKUMAR. K.R (MECH)

ABSTRACT:

A prototype automatic track tensioner was developed and test-evaluated. The automatic track tensioner mitigates the chances of track shedding under dynamic conditions in a tracked armored fighting vehicle and also avoids exposure of the crew on the battlefield. This research paper focuses on virtual performance evaluation of a hydro-pneumatic type automatic track tensioner, by fitting its 3D model on a multi-Body Dynamics model of the vehicle and subjecting for virtual simulation for various road profiles and vehicle speeds. The multi-Body Dynamics analysis affirms that the automatic track tensioner plays a vital role in enhancing the off-road mobility of an armored fighting vehicle by providing real-time track tension during the running of the vehicle on different surface undulations. This paper also covers a lab-level experimental evaluation carried out on the actual hardware of the prototype, by subjecting it to an endurance test with various input loads and frequencies, in which the performance of the automatic track tensioner was excellent throughout the entire duration of the test.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JULY 2025

PAPERTITLE	PATIENT-CENTRIC FINGERNAIL DISEASE DETECTION AND TREATMENT RECOMMENDATIONS THROUGH IMAGE ANALYSIS		Mr.N CHANDRA SEKHAR REDDY (CSE)
AUTHORS	D SATTIBABU, V ESWAR IRANI, A DIVYA NAGA JYOTHI,P CHANDU, N CHANDRA SEKHAR REDDY		
JOURNALNAME	LECTURE NOTES IN NETWORKS AND SYSTEMS		
SNIP-0.233	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT:

The main aim of our project is to predict disease using nail color analysis, focusing on early diagnosis without harming patients. Traditional methods are less accurate and time-consuming. Our computer-based system processes nail images to extract features for diagnosis, particularly nail color changes. Training data from patients with specific diseases are used for matching. The system automates nail area extraction and uses media filters for analysis. It detects color changes in the early stages of disease. This research combines deep learning and image processing to identify nail diseases and recommend treatments.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JULY 2025

PAPERTITLE	COMPARISON OF MILLIGAN-MORGAN HEMORRHOIDECTOMY VERSUS LASER HAEMORRHIDOPLASTY IN PATIENTS WITH GRADE II AND III HAEMORRHOIDS: A PROSPECTIVE OBSERVATIONAL STUDY		Dr. ASFAR AHAMED N (ACSMCH)
AUTHORS	ASFAR AHAMED N, CHUDAR A, MOHAMED MARZOOK M, JASMINE SHARMILA M K		
JOURNALNAME	JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-WOS	

ABSTRACT:

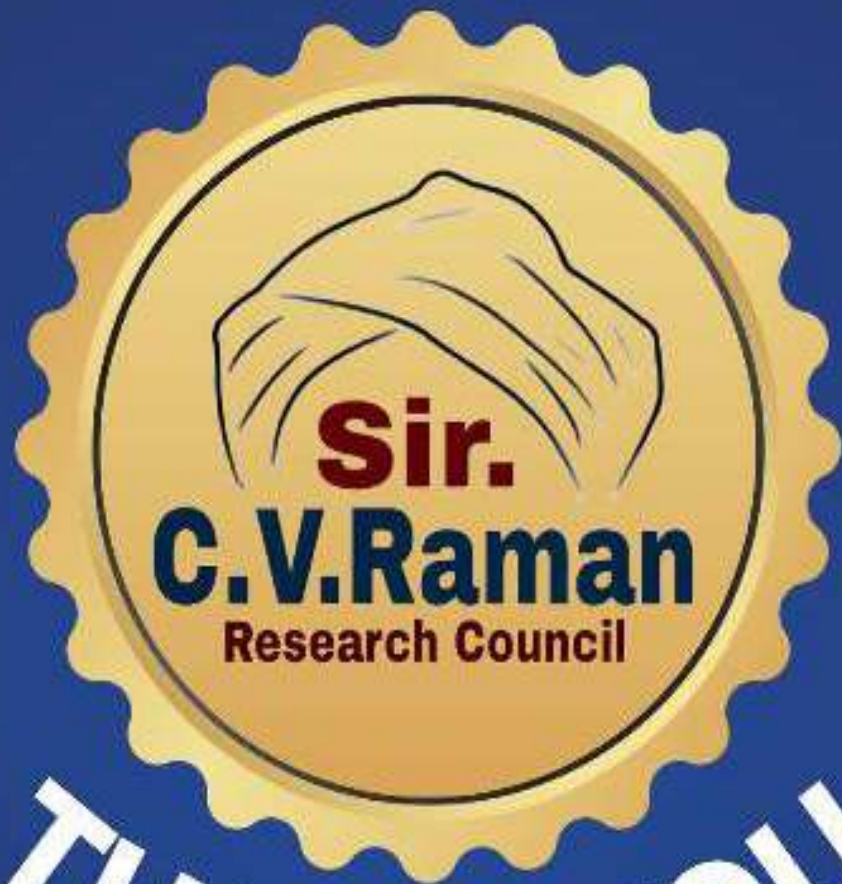
Hemorrhoidal disease results from abnormal dilation of anal cushions, influenced by dietary habits and pelvic anatomy. Surgical management remains essential for symptomatic cases, with Milligan-Morgan hemorrhoidectomy as the gold standard despite significant postoperative pain. Laser Haemorrhoidoplasty has emerged as a minimally invasive alternative with faster recovery and fewer complications. To compare the clinical outcomes of Milligan-Morgan hemorrhoidectomy and laser Haemorrhoidoplasty in patients with grade II and III haemorrhoids, focusing on postoperative pain, hospital stay, complications, and recovery time. A prospective observational study was conducted in the Department of General Surgery at Sri Lalithambigai Medical College and Hospital, Chennai, Tamil Nadu, India, from January 2022 to June 2023 (including three months of follow-up). A total of 40 patients were randomly assigned into 2 groups: group A (laser) with 20 patients and group B (Milligan-Morgan) with 20 patients. The postoperative outcomes, including duration of intervention, pain, hospital stay, and return-to-work time (recovery time), were assessed. Statistical analysis was performed using Statistical Package for the Social Sciences (SPSS) software, with $p < 0.05$ considered significant. The mean age of the study participants was 41.35 ± 13.95 in the laser group vs 43.3 ± 12.75 in the open group, with no significant age or sex difference. The laser group had significantly lower postoperative pain {Visual Analogue Scale (VAS) 4.60 ± 1.14 vs. 9.15 ± 0.67 on Day 1, $p < 0.001$ }, shorter operative time (19.85 min vs. 54.75 min), reduced intraoperative blood loss (7 ± 2.51 mL vs. 23 ± 5.23 mL, $p < 0.001$), and shorter hospital stay (1.1 vs. 1.85 days, $p < 0.001$). Recovery time was significantly faster in the laser group (7.75 ± 2.40 vs. 21 ± 4.45 days, $p < 0.01$). Complications such as secondary bleeding in 4 (20%) patients, urinary retention in 5 (25%) patients, and anal stenosis in 5 (25%) patients occurred only in the open group. Laser Haemorrhoidoplasty offers significant advantages over Milligan-Morgan hemorrhoidectomy, including reduced pain, faster recovery, and fewer complications.

Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JULY 2025

PAPER TITLE	INSIGHTS INTO CARTILAGE IMAGING IN CARTILAGE TISSUE REGENERATION		 Dr MADHAN JEYARAMAN (ACSMCH)
AUTHORS	MADHAN JEYARAMAN, NAVEEN JEYARAMAN, ARULKUMAR NALLAKUMARASAMY, SWAMINATHAN RAMASUBRAMANIAN, SATHISH MUTHU		
JOURNAL NAME	WORLD JOURNAL OF ORTHOPEDICS		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-WOS/SCOPUS	

ABSTRACT:

Cartilage, as a specialized connective tissue, underpins joint mobility and mechanical load distribution while exhibiting inherently limited self-repair capabilities. This comprehensive review redefines the current landscape of cartilage imaging by exploring conventional and advanced modalities used to assess both the structural and biochemical attributes of cartilage. Whereas conventional radiography and ultrasound offer rudimentary, indirect assessments, cutting-edge techniques - including magnetic resonance imaging (MRI)-based sequences such as T2 mapping, delayed gadolinium-enhanced MRI of cartilage, and sodium MRI - enable early detection of molecular alterations in the cartilage matrix. In addition, hybrid approaches like positron emission tomography-MRI are emerging to provide integrative molecular and structural insights. This article critically appraises imaging strategies in the context of regenerative interventions, highlighting technical innovations, persistent challenges, and future directions to facilitate improved diagnostic accuracy and therapeutic monitoring.



THANK YOU