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Periyar E.V.R. High Road, Maduravoyal, Chennai-95. Tamilnadu, India.



MONTHLY APPRECIATION
FEBRUARY -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 the month of FEBRUARY 2025. We are also pleased to announce the “**STAR FIRST AUTHOR**”, “**STAR CO-AUTHOR**,” and “**STAR RESEARCH SCHOLAR**” of FEBRUARY 2025.

	STAR FIRSTAUTHOR (FA CATEGORY)	Dr.J.CARLIN JERSHA RACHEL (PHYSIOTHERAPY)	
	STAR CO-AUTHOR (CA CATEGORY)	Dr MADHAN JEYARAMAN (ACSMCH)	
	STAR STUDENT/ RESEARCH SCHOLAR	Ms. R.HEMA AARTHI (ACSMCH)	

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

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

PAPERTITLE	COMPARISON OF THE EFFECT OF TELECONSULTATIONS, HYBRID VISITS, AND IN- PERSON VISITS ON GLYCEMIC AND METABOLIC PARAMETERS AMONG INDIVIDUALS WITH TYPE 2 DIABETES IN INDIA		 Ms. R.HEMA AARTHI (ACSMCH)
AUTHORS	ANANDAKUMAR AMUTHA, SHYAMA REJI, RAMAMURTHY HEMA AARTHI, SRINIVAS KEERTAN RAO., S GANESAN, SARAVANAN JEBARANI., GANGADHARA PRAVEEN, RANJIT UNNIKRISHNAN, VISWANATHAN MOHAN, RANJIT MOHAN ANJANA		
JOURNALNAME	JOURNAL OF DIABETES SCIENCE AND TECHNOLOGY		
SNIP-1.082	IMPACTFACTOR-3.7	INDEXED-WOS/SCOPUS	

ABSTRACT:

We compared biochemical and clinical data of individuals with type 2 diabetes (T2D) who opted for only teleconsultation (ie, no in-person visit at all), hybrid visits (combining home blood tests and in-person consultation), and fully in-person visits (both tests and consultation in person) at a tertiary care diabetes centre. In this observational cohort study, we retrieved demographic, anthropometric, and biochemical data of 8197 individuals with T2D who sought diabetes care between 2021 and 2023 (384 participants with only teleconsultations, 721 with hybrid visits, and 7092 with fully in-person visits) from the electronic medical records of a chain of tertiary diabetes care centers across India. Individuals who opted for teleconsultation had a shorter duration of diabetes compared with those who opted for hybrid or fully in-person visits. Although participants who opted for a teleconsultation had better glycemic and lipid control at baseline, those who underwent hybrid and in-person visits showed greater improvements in fasting plasma glucose, glycated hemoglobin (A1c), and LDL cholesterol (LDL-C) during follow-up. Improvements in overall ABC target achievement (A1c, Blood pressure, and LDL-C) were greater in participants who had in-person visits compared with the other two groups. While teleconsultation is a useful complement to in-person visits, the latter results in better glycemic and lipid control, perhaps due to more effective engagement with the diabetes care team.



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Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –FEBRUARY 2025		
PAPERTITLE	FRAMEWORK FOR ADOPTION OF ENABLING TECHNOLOGIES FOR IMPROVED OUTCOMES IN SPINE SURGERY	
AUTHORS	SATHISH MUTHU, SWAMINATHAN RAMASUBRAMANIAN, MADHAN JEYARAMAN,	

	ROGER HARTL, JAVAD TAVAKOLI, XIAOLONG CHEN, WAEEL HAMOUDA, HANS JORG MEISEL, TIM YOON, AMIT JAIN	
JOURNALNAME	GLOBAL SPINE JOURNAL	
SNIP-NIL	IMPACTFACTOR-3	INDEXED-WOS/SCOPUS



Dr.MADHAN
JEYARAMAN
(ACSMCH)

ABSTRACT:

We aim to investigate the integration and impact of enabling technologies, such as augmented reality, virtual reality, mixed reality, navigation, robotics, and artificial intelligence, within the domain of spinal surgery. We made a literature review of articles that examined the progression of adoption from initial to subsequent adopters. We also analysed the key determinants that influence the adopting of these technologies into clinical settings. These include cost-effectiveness, ease of integration, patient acceptance, learning curves, and availability of training resources. Based on the available data, a suggestion has been made on the adoption framework for clinical utility. These technological advancements have the potential to transform surgical practice, offering improved precision and efficiency. The journey toward widespread adoption presents challenges, which include the financial implications, the necessity for specialized training, and the complexities associated with integration. To navigate these hurdles, the study proposes recommendations to improve cost efficiency, streamline technology integration, invest in professional development, and nurture a culture of innovation and research. **Conclusions:** A framework has been established to evaluate and integrate state-of-the-art technologies in spinal surgery, thereby maximizing their potential impact on surgical outcomes and patient welfare.

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

PAPER TITLE	STRUCTURAL, SPECTRAL, THERMAL ANALYSES AND RADIATION EFFECT OF NON-STOICHIOMETRIC TUTTON’S SALT CRYSTAL: [(NH4)2CO0.69ZN0.31] (SO4)2.6H2O		
AUTHORS	N VENKATACHALAM, J CHRISTINA RHODA, K S NAGARAJA, M PRABHAHARAN, C KARNAN		
JOURNAL NAME	JOURNAL OF MATERIALS SCIENCE: MATERIALS IN ELECTRONICS		
SNIP-0.696	IMPACTFACTOR-2.8	INDEXED-WOS/SCOPUS	
			Dr.K .S .NAGARAJA ARI

ABSTRACT:

A comprehensive investigation was conducted to validate the application of ammonium cobalt zinc sulphate hexahydrate (ACZS), Tutton's salt, crystals for LED applications. Non-stoichiometric crystals of $[(\text{NH}_4)_2\text{Co}_{0.69}\text{Zn}_{0.31}](\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$ (ACZS) were grown using a slow evaporation technique. The monoclinic crystal system and $P2_1/c$ centrosymmetric space group of the ACZS crystal were confirmed using single-crystal X-ray diffraction analysis. $[\text{Co}(\text{H}_2\text{O})_6]^{2+}$ or $[\text{Zn}(\text{H}_2\text{O})_6]^{2+}$ octahedral geometry with the extensive H-bonding with SO_4^{2-} ions and NH_4^+ ions resulted in a 3D supramolecular assembly H-bonded network. The chemical composition of the crystals was verified using the EDX analysis. FTIR and Raman spectra indicated the presence of the main functional groups. SEM analysis of the ACZS crystal indicated a uniform morphology. The ACZS crystal demonstrated prominent absorption bands in the visible region with a bandgap of 4.13 eV. The crystal exhibited strong emission at 764 nm upon irradiation at 510 nm, validating its utilization in the development of LEDs. The chromaticity diagram indicated a yellowish-orange emission near warm white light. The EPR spectrum showed a complex peak, indicating the presence of octahedral $[\text{Co}(\text{H}_2\text{O})_6]^{2+} (d^7)$. TG-DTG-DSC analyses provided information on the composition and components of the mixed cationic non-stoichiometric inorganic salt. Examination of laser-induced damage threshold analysis revealed that the crystal had a high damage threshold of 31.43 GW cm^{-2} .

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

PAPER TITLE	MARINE-DERIVED CHEMOTHERAPEUTIC AGENT FOR ACUTE LEUKEMIA: IN SILICO AND IN VITRO EVALUATION	
AUTHORS	REVATHI BOYINA, SREYA KOSANAM, KISHORE BABU M.	
JOURNAL NAME	CHEMISTRY AND BIODIVERSITY	
SNIP-NIL	IMPACTFACTOR-2.5	INDEXED-WOS/SCOPUS



Dr. SREYA KOSANAM
(PHARMACY)

ABSTRACT:

Acute leukemia, a severe hematological malignancy marked by abnormal white blood cell proliferation, often resists conventional therapies. The growing interest in natural therapeutics has spotlighted marine-derived compounds for their unique bioactivities. This study explores the therapeutic potential of *Ascophyllum nodosum* extract, focusing on Laminine, in modulating key leukemia-associated proteins, lactate dehydrogenase (LDH), and phosphoinositide 3-kinase (PIK3), using in silico and in vitro approaches. Molecular docking was performed to assess Laminine's binding interactions with LDH and PIK3. An in vitro leukemia model was adopted using N-Nitroso-N-ethylurea-treated Wistar rats. Efficacy was evaluated through LDH release, PIK3 activity, hematological parameters, and clinical signs of leukemia. Docking studies revealed moderate binding affinities (-6.5 kcal/mol) of Laminine with LDH and PIK3, suggesting potential therapeutic interactions. In vitro, the extract demonstrated dose-dependent cytoprotective effects, reducing LDH release and restoring PIK3 activity. Leukemia-induced hematological abnormalities, including elevated white blood cell counts, anemia, and thrombocytopenia, were partially reversed. The highest dose (50 μ M) showed maximal efficacy in reducing cytotoxicity and modulating signaling pathways. *A. nodosum* extract, particularly Laminine, shows potential as a therapeutic candidate against leukemia by targeting metabolic and signaling pathways. Further research is needed to optimize its clinical utility and elucidate its mechanisms.

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

PAPERTITLE	EXPLORING WITHANOLIDS FROM WITHANIA SOMNIFERA: A PROMISING AVENUE FOR ALZHEIMER’S DISEASE TREATMENT		 Dr.GEETHA BIRUDALA (PHARMACY)
AUTHORS	CHITIKELA P PULLAIAH, PREETHI PRIYADHARSHINI SP, PHAREEDHA SK, YAMINI NEMALAPALLI, GEETHA BIRUDALA, S LAHARI, SHANMUGAM VIPPAMAKULA, R SHAKILA, MUNI SWAMY GANJAYI, RAGHAVENDRA MITTA.		
JOURNALNAME	CURRENT PHARMACOLOGY REPORTS		
SNIP-NIL	IMPACTFACTOR-2.2	INDEXED-WOS/SCOPUS	

ABSTRACT:

Purpose of the Review: This review focuses on withanolides from *Withania somnifera* as neuroprotective agents against Alzheimer's disease, highlighting their clinical, cellular, and molecular mechanisms of action. **Recent Findings:** Withanolides, natural steroidal lactones from *W. somnifera*, enhance memory and provide significant neuroprotection both in vitro and in vivo. They inhibit amyloid- β oligomer aggregation, prevent tau hyperphosphorylation, and exert antioxidant effects by modulating the Keap1/Nrf2 pathway. In addition, they inhibit acetylcholinesterase and pseudo-cholinesterase, thereby improving memory and cognition. Withanolides reduce inflammation by lowering pro-inflammatory markers, such as IL-1 β , IL-6, MCP-1, and TNF- α , and prevent neuronal apoptosis by decreasing Bax/caspase-3 and cyto-c expression. They also enhance neuroplasticity by increasing the levels of brain-derived neurotropic factor (BDNF) and glial fibrillary protein (GFAP), providing neuroprotection. Clinical trials have confirmed cognitive enhancement, memory improvement, and stress relief in patients with Alzheimer's disease. **Conclusion:** Withanolides provide neuroprotection in Alzheimer's disease through antioxidant and anti-inflammatory activities, inhibition of amyloid- β aggregation, tau hyperphosphorylation, and enhancement of acetylcholine. Current in vitro and in vivo data indicate that withanolides have strong potential to be effective treatments for Alzheimer's disease.

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

PAPERTITLE	EFFICACY OF CYANOACRYLATE TISSUE ADHESIVE FOR INTRAORAL WOUND CLOSURE: A SINGLE-ARM PROSPECTIVE PRELIMINARY CLINICAL STUDY		 MR.KANISHK SRIVASTAVA (TMDCH)
AUTHORS	KANISHK SRIVASTAVA, KOTTAISAMI SENTHIL KUMAR, PRADEEP CHRISTOPHER JESUDAS.		
JOURNALNAME	JOURNAL OF MAXILLOFACIAL AND ORAL SURGERY		
SNIP - NIL	IMPACTFACTOR -0.6	INDEXED - WOS/SCOPUS	

ABSTRACT

This study aimed to evaluate the efficacy of cyanoacrylate tissue adhesive (PeriAcryl90 High Viscosity) for intraoral wound closure . Subjects undergoing minor oral surgical procedures such as extractions, canine exposure, surgical removal of impacted teeth, alveoloplasty, biopsy, and mucocoele excision were included in the study. The study setting was the outpatient department, and the study design was a single-arm clinical study. Wound closure was performed using cyanoacrylate tissue adhesive. The patients were followed up for 7 postoperative days. The time of application of the tissue adhesive, the bonding of adhesive to the tissue surface, signs of inflammation in relation to cyanoacrylate, allergic reaction, and wound dehiscence were evaluated. Fifty participants completed the study. The mean application time in seconds was 233.84 s. There was no significant inflammatory or allergic response to the cyanoacrylate adhesive at the surgical test site. Only three of 50 subjects reported wound dehiscence, but healing occurred uneventfully by the end of one week. Cyanoacrylate tissue adhesive can be safely used in minor oral surgeries as a method of closure, with high patient satisfaction and compliance. The routine use of tissue adhesives in daily practice in the surgical field is limited by unawareness, conventional beliefs, and the high cost of the adhesive material itself.

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

PAPERTITLE	FINITE ELEMENT ANALYSIS OF TITANIUM PLATES FOR UNILATERAL CONDYLAR NECK FRACTURE FIXATION: A COMPUTATIONAL STUDY		 Dr.AGALYAH KALYAN KUMAR (TMDCH)
AUTHORS	AGALYAH KALYAN KUMAR, PRADEEP CHRISTOPHER JESUDAS, MOHAMED AFRADH K, VANDANA SHENOY K.		
JOURNALNAME	JOURNAL OF MAXILLOFACIAL AND ORAL SURGERY		
SNIP-NILL	IMPACTFACTOR-0.6	INDEXED-WOS/SCOPUS	

ABSTRACT:

Condylar neck fractures are challenging to treat owing to their intricate biomechanics, constrained accessibility, and narrow anatomical dimensions. This complexity hinders the precise placement of internal fixation devices and the assurance of fracture stability. Despite various osteosynthesis devices, a lacuna persists regarding the effectiveness of these plates in stabilizing condylar neck fractures. This study compares the performance of five titanium osteosynthesis devices (single 4-hole Miniplate, Lambda, Trapezoidal, Rhomboidal, Alpha plates) in fixing unilateral condylar neck fractures using computational finite element analysis (FEA). Mandibular model, derived from a CT scan, underwent virtual condylar neck fracture simulation. Osteosynthetic plate models were adapted to the fractured segments. Implementing FEA, each model was evaluated under two loading scenarios: (i) reduced post-operative bite force of 135 N and (ii) clenching masticatory force of 500 N. Analysed parameters encompassed stress on screws across different plates, displacements along the fracture line, bone strains on the screw portion, and stress on plates, implant deformation, and rigidity. At 135N, all 5 plates offer an adequate fixation with a small risk of screw loosening for the rhomboidal and trapezoidal plates. For 500N, the lambda and alpha plates showed superior performance by evenly distributing strains within the bone, maintaining rigidity, and reducing implant failure. Lambda and Alpha plates demonstrated superior performance under increased loads. Conversely, Trapezoidal and Rhomboidal plates are not advisable for condylar neck fractures, particularly when anticipating larger functional loads.

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

PAPER TITLE	EFFECT OF STROBOSCOPIC VISUAL TRAINING IN ATHLETES		
AUTHORS	JAGADESWARAN DHAKSHINAMOORTHY, KANMANI KOTHANDARAMAN.		
JOURNAL NAME	JOURNAL OF HUMAN SPORT AND EXERCISE		
SNIP-0.359	-0.5 IMPACTFACTOR	INDEXED-WOS/SCOPUS	
			Dr.KANMANI KOTHANDARAMAN (ACSMCH)

ABSTRACT:

Visual abilities and motor performance are the key factor in athletes to improve their performance. One emerging technology to enhance athletes' visuomotor and cognitive abilities is SVT. This paper aims to show how SVT can be used as an intervention technique in athletics to enhance athletes' performance. Any research that examined the use of strobe glasses as a training aid for physically fit athletes was taken into consideration for this evaluation. The purpose of this study is to investigate the impact of stroboscopic visual training on athletes. Methods: In January 2024, searches were conducted using a variety of databases, including PubMed, Scopus, Google Scholar, Springer, ProQuest databases. Screening publications that included strobe glasses as a training aid was done by two independent reviewers. 13 of the 25 full-text articles that were evaluated for inclusion and exclusion satisfied the requirements. The results of the SVT intervention were: enhanced visual and visuomotor function; improved reaction time; enhanced eye-hand coordination; enhanced perceptual skills; enhanced short-term memory; enhanced central visual field motion; enhanced anticipatory timing; no improvement in peripheral field motion; some athletes reported feeling mentally exhausted and unable to identify colours. More research is necessary to establish the ideal strobe dosage and administration since there are no established guidelines for SVT intervention settings, duration, and outcomes in athletes. With future recommendations to athletes and coaches to incorporate SVT as part of sports training to improve their on-field performance, this review outlines the advantages of SVT intervention in athletes as well as the current research gaps addressing the usage of SVT.

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

PAPERTITLE	REDEFINING RESPIRATORY CARE WITH DIGITAL INTERVENTIONS IN CHILDREN WITH BRONCHIAL ASTHMA: EXPLORING THE EFFICACY OF GAME-BASED BREATHING TRAINING AND THE BUTEYKO METHOD		 Ms.CARLIN JERSHA RACHEL J (PHYSIOTHERAPY)
AUTHORS	CARLIN JERSHA RACHEL J, KAUSHIK RAMAN, TREPHERA BLESSY, RAMALAKSHMI KRISHNAN.		
JOURNALNAME	INDIAN JOURNAL OF RESPIRATORY CARE		
SNIP-NIL	IMPACTFACTOR-0.2	INDEXED-WOS/SCOPUS	

ABSTRACT:

Aim and background This study aimed to evaluate a smartphone game application with the Buteyko breathing technique to improve pulmonary function in asthma patients. Airway constriction and inflammation are the hallmarks of asthma. It is the most prevalent chronic illness in both adults and children. Although there are many recent studies showing the effectiveness of various methods, the Buteyko method and game therapy applications may reduce medication needs and symptoms. **Methods** This was a quasi-experimental study of pre- and post-trial type carried out with 30 children diagnosed with asthma. Based on the inclusion and exclusion criteria, they were chosen using a simple random sampling method and split into two groups. Subjects of group A received the Buteyko breathing technique, and subjects of group B received the Buteyko breathing technique along with an interventional digital breathing technique, for 15 minutes, 5 sessions per week for 4 weeks. The pre- and posttests were analyzed using the Asthma Control Test and the Becker Asthma Score. **Results.** On comparison, a significant difference in means at $p \leq 0.05$ was observed in group B when comparing the Academic Competence Test (ACT) and Behavioral Assessment Scale (BAS) scores of groups A and B between pre- and posttests. **Conclusion:** The Buteyko breathing technique, along with the Digital Interventional Breathing Technique, is more effective in improving pulmonary function in asthma patients compared to the Buteyko breathing technique. The findings of this study pave the way for depicting the role of games in the treatment protocol, by improving the interaction of the patient and thereby improving pulmonary function. **Clinical significance:** The evaluation of digital solutions for asthma, including artificial intelligence (AI)-assisted breathing techniques and the Buteyko method, holds significant clinical relevance. These innovative approaches offer potential advancements in personalized asthma management by improving breathing efficiency and reducing reliance on medication. Digital interventional breathing techniques can provide real-time feedback and tailored exercises, while the Buteyko method emphasizes controlled breathing to reduce symptoms. Together, these technologies promise to enhance patient outcomes, increase adherence to treatment protocols, and ultimately improve the quality of life for individuals with asthma.

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

PAPERTITLE	EVOLUTIONARY COMPUTATION IN EARLY DETECTION AND CLASSIFICATION OF PLANT DISEASES FROM AN AERIAL VIEW OF AGRICULTURAL LANDS		 KESAVAN SUJATHA (EEE)
AUTHORS	R S PONMAGAL, PRAMEELADEVI CHILLAKURU, N JANAKI, N P G BHAVANI, KESAVAN SUJATHA, JAYALATSUMI UMAPATHY.		
JOURNALNAME	PROCEDIA COMPUTER SCIENCE.		
SNIP-0.871	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT:

This research presents a new combined deep learning system for effective and reliable identification of plant diseases in complicated agricultural environments. One of the most difficult jobs in agriculture is identifying plant diseases early on. Early disease detection in plants is crucial for increasing agricultural yield. With the application of machine learning and deep learning techniques, this issue has been resolved. Large crop farms can now detect plant illnesses automatically, which is advantageous as it reduces the monitoring time. The suggested approach consists of multiple important stages. To begin with, the image quality of the agricultural lands is improved through preprocessing techniques like noise reduction, gamma correction, and white balancing. Data augmentation is used to expand the dataset and improve the model's generalization capacity. Efficient methods such as Efficient Det and Squeeze Net, as well as color- and shape-based features, are used for feature extraction. The most relevant features are selected by a Hybrid Optimization Algorithm (HOA), which integrates Mother Optimization Algorithm (MOA), Teaching Learning-Based Optimization (TLBO), and Improved Wild Horse Optimization to detect the various plant diseases like Bacterial Blight, Tungro, Blast, and Brown spot. At last, a deep learning detector, which may include Recurrent Convolutional Neural Networks (R-CNNs) and Recurrent Neural Networks (RNNs), identifies the location and type of objects. The use of hyperparameter tuning techniques is also implemented to avoid overfitting and improve the overall generalization. This comprehensive approach depicts encouraging results in overcoming challenges in plant disease detection.

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

PAPERTITLE	FABRICATED LOOFAH SPONGE SUPPORTED INDIGENOUS TANNERY EFFLUENT PROTEUS MIRABILIS BACTERIA - A STRATEGY FOR HEAVY METAL REMOVAL		 Ms. SANTHIYA JAYAKUMAR (BIO-TECHNOLOGY)
AUTHORS	SANTHIYA JAYAKUMAR, KOTTAI VEEDU J SHARMILA, SUGANYA KALAIARASU.		
JOURNALNAME	RESEARCH SQUARE		
SNIP-0.403	IMPACTFACTOR-NIL	INDEXED: SCOPUS	

ABSTRACT:

The widespread contamination of heavy metals caused by anthropogenically introduced acidic tannery effluent into the environment threatens living organisms. Experimental: The paper presents the first scientific study of chromium, copper, and nickel detoxification by novel, fabricated loofah sponges immobilised with an indigenous organism. Results: The antibiotic susceptibility test revealed that the indigenous isolated organism was susceptible and intermediate to 30 tested antibiotics. The strains revealed to be *Proteus mirabilis* R10SANT [PQ069783], *Proteus mirabilis* MPE4069 [PQ069764.1], *Proteus mirabilis* R4SANT [PQ069776.1], *Proteus mirabilis* R8SANT [PQ069781.1], and it showed good heavy metal detoxification potential. Chromium, copper, and nickel degradation reached 79.03, 89, and 75.35% for free cells at a dose of 150 ppm, and further increased to 85.40, 91.2, and 80.90% at a dosage of 200 ppm. Increased adsorption for chromium, copper, and nickel has been proven by immobilized strain in innovative modified loofah sponges to levels of 175.1, 184.56, and 168.02 mg/g; at 200 ppm dose, this increased by 2.51%, 1.8%, and 3.7%, respectively. Novelty: This study proves heavy metal detoxification by novel modified loofah sponge supported indigenous organisms so it can be used for tanneries and other heavy metal contaminated sites.

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

PAPERTITLE	INVESTIGATING THE EFFECT OF CONVENTIONAL PHYSIOTHERAPY TRAINING ON MUSCLE ACTIVITY AMONG DIABETIC NEUROPATHY PATIENTS THROUGH WIRELESS EMG: A PILOT STUDY		 Dr.THARANI GNAMOORTHY (PHYSIOTHERAPY)
AUTHORS	THARANI GNANAMOORTHY, JIBI PAUL, JAGATHEESAN ALAGESAN, NARAYANASWAMY HARIKRISHNAN.		
JOURNALNAME	NEUROSCIENCE RESEARCH NOTES		
SNIP-0.333	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT:

People with diabetes often experience muscle weakness and decreased mobility due to diabetic neuropathy. This condition usually arises due to prolonged elevated blood sugar levels, which damage the motor nerves, innervating the muscles and sensory nerves. As the neuropathy progresses, it can cause loss of muscle mass and diminished motor function in the legs and feet. Consequently, individuals with diabetic neuropathy may experience difficulties with balance, walking, and performing daily activities. This weakness increases the risk of falls and injuries and contributes to reduced mobility and a lower quality of life. Hence, early intervention and management are essential to preserve muscle strength and functionality among the diabetic population. Managing muscle function and mobility in affected individuals is a significant challenge. This pilot study aimed to investigate the effect of conventional physiotherapy training on muscle activity in diabetic neuropathy patients using Noraxon wireless sensor electromyography (EMG) technology. The study included 8 patients aged 45-65; after obtaining consent and meeting selection criteria, these patients were enrolled. Wireless sensor EMG monitored muscle activity in the tibialis anterior and soleus. Participants underwent conventional physiotherapy, consisting of 40 minutes daily, 5 days a week, over 3 months. The result showed a significant increase in the maximum voluntary contraction of tibialis anterior and soleus muscles on both right and left side mean values at $p \leq 0.001$. In conclusion, the study demonstrated that diabetic neuropathy causes alterations in muscle dynamics, particularly in distal muscles. These findings offer valuable insights into the progression of neuropathy and highlight the effectiveness of physiotherapy in mitigating its effects by significantly enhancing the maximum voluntary contraction of these muscles.

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

PAPERTITLE	BRAIN TUMOR DETECTION AND CLASSIFICATION USING DEEP LEARNING ALGORITHMS: A SURVEY		 Mr.CHIRANJEEVI KOTHA PALLI (CSE)
AUTHORS	CHIRANJEEVI KOTHAPALLI, D. VICTO SUDHAGEORGE.		
JOURNALNAME	AIP CONFERENCE PROCEEDINGS		
SNIP-0.291	IMPACT FACTOR-NIL	INDEXED - SCOPUS	

ABSTRACT:

Brain cancer or tumor is one of the fastest spreading diseases. Detecting a brain tumor at the initial stage is the main key to avoiding a fatal scenario. MRI is the common practice to identify the current scenario of a tumor in the human brain. Collecting images from an MRI scan and classifying them for detecting tumors is a very big task. Detection becomes difficult because of the large number of images produced after an MRI Scan. Applying a large set of images and trying to detect a tumor is a very tough task. In this paper, we represented the classification of collected MRI Images and detected tumor scenarios in those images using deep learning techniques, especially using convolutional neural networks (CNN). This survey will help researchers further detect and diagnose brain tumors effectively and accurately.

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

PAPERTITLE	IOSE FOR REAL TIME MONITORING OF COMBUSTION FLAMES (RMCF) IN INDUSTRIAL BOILERS		
AUTHORS	KESAVAN SUJATHA, G ROHINI, G DURGA DEVI, R S PONMAGAL, S BHUVANESWARI, N JANAKI, LATHA B, N P G BHAVANI, V SRIVIDHYA.		
JOURNALNAME	LECTURE NOTES IN NETWORKS AND SYSTEMS		
SNIP-0.282	IMPACTFACTOR-NIL	INDEXED-SCOPUS	
			Dr.KESAVAN SUJATHA (EEE)

ABSTRACT:

The innovation in the area of Internet of Smart Environment (IOsE) for the quality prediction of combustion process in industrial boilers is highlighted in this article. IOsE is quality-reliant. The characteristics of flame in the combustion chamber are used for the identification and control of Carbon Dioxide (CO₂) emissions. Currently, existing methods for flame analysis include non-invasive and high-frequency spectral light-dependent imaging techniques. The colour of the flame inside the Combustion Chamber (CCh) determines the prediction of Combustion Quality (CQ) and thereby its corresponding Combustion Quality Index (CQI). An online quality detection scheme for a smart environment with a colour extraction technique from the flame images to identify complete and incomplete combustion conditions is developed. For this, the intensity value of the pixels in the Red-Blue-Green (RGB) plane is utilized. The coal is used as the prime fuel to heat water and convert it to steam for operating the industrial boilers. The quality prediction of combustion from flame colour and shape includes Complete Combustion (CC) and Incomplete Combustion (IC) categories. The flame images for CC and IC categories are subjected to preprocessing, attribute extraction, and finally, the prediction of flame quality is done using Random Forest (RF), Ada Boost (AB), Gradient Boosting (GB), Decision Tree (DT), and Multi-Layer Perceptron (MLP). MLP is found to effectively categorize the CQ using the performance metrics like Sensitivity (SEY), Specificity (SPY), and Accuracy (ACY).

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

PAPERTITLE	REAL-TIME AIR QUALITY INDEX MONITORING AND PREDICTION USING LORA COMMUNICATION		 Dr.KIRUBADEVI. T (CSE)
AUTHORS	KIRUBADEVI THIYAGARAJAN, NEELARAPU TEJASWINI, R SHIVANI, M SREEJA, R M SARITHA, P DINESH KUMAR.		
JOURNALNAME	LECTURE NOTES OF THE INSTITUTE FOR COMPUTER SCIENCES, SOCIAL INFORMATICS AND TELECOMMUNICATIONS ENGINEERING		
SNIP-0.137	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT

This paper presents the development of a dedicated ground station optimized for LoRa satellite communication. The station is equipped with crucial components, including an antenna, transceiver, modem, RF amplifier, tracking and control system, power supply, computer with specialized software, networking infrastructure, and weatherproofing. The RF amplifier is instrumental in boosting signal strength and expanding the communication range to counteract transmission signal loss. The tracking and control system ensures precise alignment of the antenna with the satellite, ensuring a consistent and dependable connection. A reliable power supply, coupled with backup sources like batteries or generators, mitigates downtime risks. The computer system, integrated with specialized software, manages transceiver setup, satellite tracking, and data processing. Networking equipment facilitates internet or local network connectivity for seamless data exchange and remote monitoring. Weatherproofing measures are implemented to safeguard the station's equipment. This comprehensive ground station design is geared towards enhancing the efficiency and reliability of LoRa satellite communication, delivering tangible benefits to researchers, engineers, and IoT practitioners.

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

PAPERTITLE	AI-ENHANCED ARDUINO-BASED CUSTOMIZED SMART GLASSES FOR BLIND PEOPLE INTEGRATED WITH SPEECH SYNTHESIS		 Mr.Y RAJESH (CSE)
AUTHORS	Y RAJESH, K BHASKAR, K AUDI DINAKAR, KIRUBADEVI THIYAGARAJAN, M PRIYANGA		
JOURNALNAME	LECTURE NOTES OF THE INSTITUTE FOR COMPUTER SCIENCES, SOCIAL INFORMATICS AND TELECOMMUNICATIONS ENGINEERING		
SNIP-0.137	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT

Blindness poses significant challenges to the independence and mobility of individuals in their daily lives. In recent years, there has been a growing interest in the development of smart glasses for blind people. These glasses use a variety of technologies to help blind people navigate their surroundings and interact with the world around them. One of the most promising technologies for smart glasses for blind people is artificial intelligence (AI). AI can be used to enhance the functionality of smart glasses by providing real-time information about the environment, such as the location of obstacles, the identity of people, and the text of signs. This model represents an AI-enhanced Arduino-based customized smart glasses for blind people. The glasses use a variety of sensors, including a camera, a microphone, and an accelerometer, to collect data about the environment. This data is then processed by an AI algorithm to identify objects and obstacles. The glasses also have a speech synthesizer that can be used to provide audio feedback to the user. The AI-enhanced Arduino-based customized smart glasses for blind people have the potential to make a significant difference in the lives of blind people. They can help blind people for obstacle detection and object recognition, and navigate their surroundings more independently and safely, and they can also help them to interact with the world around them more easily.

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

PAPERTITLE	IMPLEMENTING CLOUD COMPUTING IN DRUG DISCOVERY AND TELEMEDICINE FOR QUANTITATIVE STRUCTURE-ACTIVITY RELATIONSHIP ANALYSIS		 Dr.RAMESH BABU VENKATACHALAM (CSE)
AUTHORS	PALAYANOOR SEETHA PATHY RAMAPRABA., BELLAM RAVINDRA BABU., NALLATHAMPI RAJAMANI REJIN PAUL., VARADAN SHARMILA., RAMESH BABU VENKATACHALAM., RAMAN RAMYA., SUBBIAH MURUGAN		
JOURNALNAME	INTERNATIONAL JOURNAL OF ELECTRICAL AND COMPUTER ENGINEERING (IJECE)		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT

This work aims to use cutting-edge machine learning methods to improve quantitative structure-activity relationship (QSAR) analysis, which is used in drug development and telemedicine. The major goal is to examine the performance of several predictive modeling approaches, including random forest, deep learning-based QSAR models, and support vector machines (SVM). It investigates the potential of feature selection techniques developed in cheminformatics for enhancing model accuracy. The innovative aspect is using cloud computing resources to strengthen computational skills, allowing for managing massive amounts of chemical information. This strategy produces accurate and generalizable QSAR models. By using the cloud's scalability and constant availability, remote healthcare apps have a workable answer. The goal is to show how these methods may improve telemedicine and the drug development process. Utilizing cloud computing equips researchers with a flexible set of tools for precise and timely QSAR analysis, speeding up the discovery of bioactive chemicals for therapeutic use. This new method fits well with the dynamic nature of pharmaceutical studies and has the potential to transform the way drugs are developed and delivered to patients via telemedicine.

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

PAPERTITLE	EFFECTIVENESS OF FEATURE EXTRACTION TECHNIQUES FOR FACIAL IDENTIFICATION		 PRISILLA K M FOCA
AUTHORS	PRISILLA K M, JAYASHRI NAGASUBRAMANIAM.		
JOURNALNAME	INTERNATIONAL JOURNAL OF COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING		
SNIP-NILL	IMPACTFACTOR-NILL	INDEXED-SCOPUS	

ABSTRACT:

Criminal activities and crime tenancy are increasing in society as technology and population increase. The process of identifying and determining criminals and preventing them from getting involved in criminal activities is a tedious task for the police as well as the public. Therefore, the criminal tracking system also needs to be strengthened. Apart from the traditional system, nowadays the police and government are also implementing technology-based tracking systems for criminal identification. An efficient facial feature extraction algorithm and a face identification algorithm are needed for this identification system. In this research, the performance of principal component analysis and local binary pattern algorithms is analyzed with the support of a convolutional neural network.

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

PAPERTITLE	KNN-POWERED ONLINE VOTING SYSTEM TO IMPROVE ACCURACY AND TRANSPARENCY OF ELECTION PROCESS		 Dr.G.KAVITHA (ECE)
AUTHORS	ULLAMPARTHY JASWANTH, D SURENDIRAN MUTHUKUMAR, R ABITHA, PAMU GANESH, NANDYALA NAVEEN, KAVITHA GANESAN.		
JOURNALNAME	2025 INTERNATIONAL CONFERENCE ON MULTI-AGENT SYSTEMS FOR COLLABORATIVE INTELLIGENCE (ICMSCI)		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	

ABSTRACT:

The proposed system aims to create a safe online voting system. Nowadays, voting remains a serious safety and security issue, so this system provides high performance and security. The System seeks to develop a face recognition-based voting system that authenticates voters using machine learning, especially K-Nearest Neighbors (KNN). Entering the voter's unique username and Password is the first step in the online voting system. If the voter's Username and password are valid, the system proceeds to the next step, requesting permission to turn on the webcam and take a picture of them. Once the photo is taken, it verifies that the voter has only taken it once. The website allows the voter to cast their vote only once. Voter access is denied if the same voter picture is entered again. By logging into the website, voters can cast their vote from any place. Every minute, the website updates the results of the election. So, voters do not need to wait in long queues to cast their votes. To give voters real-time information on their voting progress. The system also features dynamic voice feedback to guide users through voting, ensuring clarity and engagement. This initiative uses facial recognition technology to enhance the security and efficiency of voting systems.

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

PAPERTITLE	ANTIFUNGAL EFFICACY OF CHITOSAN-MEDIATED FENUGREEK NANOCOMPOSITE INCORPORATED IN TISSUE CONDITIONER		
AUTHORS	MOHIKA DAMLE, PONSEKAR ABRAHAM ANANDAPANDIAN, BASKARAN ESWARAN, SWAPNANEEL PRADHAN, SILVIN JOE C J, SHREYAS DHUMKE.		
JOURNAL NAME	JOURNAL OF ORAL BIOLOGY AND CRANIOFACIAL RESEARCH		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS	
			Dr. MOHIKA DAMLE (TMDCH)

ABSTRACT:

The rough surface of dentures, coupled with xerostomia and immunosuppression, fosters microbial growth and colonization, with *Candida albicans* being a primary culprit. Tissue conditioners, used to relined ill-fitting dentures, can temporarily alleviate discomfort but are prone to microbial colonization. To address this, researchers have explored incorporating antifungal agents directly into tissue conditioners. Nanoparticles, particularly green-synthesized ones derived from fenugreek, have shown significant antifungal efficacy. Combining fenugreek extract with chitosan can further improve antifungal outcomes due to its excellent drug delivery, mucoadhesive properties, and bioavailability. Aim: To synthesize Chitosan mediated Fenugreek nanocomposite (1.5 %, 2 %, 2.5 % by weight concentrations) and evaluate its antifungal efficacy on heat-cure denture base relined with tissue conditioner mixed with nanocomposite by assessing fungal colony formation after 1st day, 1st week, and 2nd week. After synthesizing the chitosan-mediated fenugreek Nanocomposite, its characterization was performed using SEM, FTIR analysis, and UV-Vis spectroscopy. Heat-cure denture base discs coated with tissue conditioner-nanocomposite mixture were used to transfer fungal cultures onto Rose Bengal agar to assess colony formation. Chitosan-fenugreek nanoparticles were synthesized using the ionic gelation method, with fenugreek extract used for green synthesis. Kruskal-Wallis's test showed significant effects over time, with the 2.5 % group showing the lowest fungal growth at 521 CFU/mL, followed by 2 % group at 587 CFU/mL, while the 1.5 % nanocomposite group still displayed considerable fungal growth. Incorporating chitosan-mediated fenugreek nanocomposite into denture tissue conditioners offers a promising approach to reducing *Candida* growth, potentially improving oral health outcomes for denture wearers.

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

PAPER TITLE	INTRA-ARTICULAR INJECTIONS OF HYALURONIC ACID VERSUS PLASMA RICH IN GROWTH FACTORS (PRGF) FOR KNEE OSTEOARTHRITIS: A META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS	
AUTHORS	FILIPPO MIGLIORINI, NICOLA MAFFULLI, GENNARO PIPINO, MADHAN JEYARAMAN, SWAMINATHAN RAMASUBRAMANIAN, NAVEEN JEYARAMAN.	
JOURNAL NAME	DIE ORTHOPÄDIE	
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS/WOS



Dr.MADHAN JEYARAMAN (ACSMCH)

ABSTRACT:

The present meta-analysis compared intra-articular injections of hyaluronic acid (HA) versus plasma rich in growth factors (PRGF) in patients with knee osteoarthritis (OA). The outcome of interest was the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC). This study was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-analyses: the 2020 PRISMA statement. All the head-to-head randomised controlled trials (RCTs) comparing intra-articular HA injections versus PRGF were accessed and included in the present study. Only studies that clearly stated that injections were performed in patients with knee OA, irrespective of the severity of OA, were considered. Data concerning the WOMAC index were retrieved at baseline and last follow-up. The endpoint of interest was to investigate whether intra-articular HA injections are associated with WOMAC score improvement compared to PRGF injections at 4-6 months follow-up. Data from 432 patients were collected, and 76.3% (330 of 432) of the patients were women. The mean age of the patients was 58.2 ± 1.5 years, and the mean body mass index (BMI) was $28.0 \pm 0.5 \text{ kg/m}^2$. At baseline, comparability in mean age, BMI, male:female ratio, WOMAC, and related subscales was documented. The PRGF group evidenced lower values of the function subscale of the WOMAC index ($P = 0.03$). No difference was found in the overall WOMAC index ($P = 0.05$) and its stiffness ($P = 0.4$) and pain ($P = 0.07$) subscales. The current level I evidence suggests that the use of PRGF might be associated with more favorable clinical outcomes than using HA.

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

PAPERTITLE	ARTHROSCOPY FOR FEMOROACETABULAR IMPINGEMENT IN ATHLETES VERSUS NON-ATHLETES: SYSTEMATIC REVIEW AND META-ANALYSIS		 Dr.NAVEEN JEYARAMAN (SLMCH)
AUTHORS	FILIPPO MIGLIORINI, NICOLA MAFFULLI, TOMMASO BARDAZZI, SWAMINATHAN RAMASUBRAMANIAN, NAVEEN JEYARAMAN, MADHAN JEYARAMAN.		
JOURNALNAME	HEALTHCARE		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-WOS/SCOPUS	

ABSTRACT

Femoroacetabular impingement (FAI) is a frequently observed hip condition among young, active individuals- especially athletes-that can result in pain, restricted mobility, and a heightened risk of osteoarthritis. Hip arthroscopy has increasingly become the preferred surgical approach for managing FAI due to its ability to alleviate symptoms and improve function. However, potential differences in outcomes between athletes and non-athletes have not been thoroughly investigated. This systematic review and meta-analysis compared arthroscopic management for FAI in athletes versus non-athletes. The outcomes of interest were patient-reported outcome measures (PROMs) and complications. Pub Med, Web of Science, and Embase were systematically accessed until October 2024. The studies eligible were clinical investigations comparing athletes and non-athletes undergoing hip arthroscopy for FAI with a minimum follow-up of 24 months. The outcomes assessed included the Visual Analogue Scale (VAS), Hip Outcome Score for Activities of Daily Living (HOS-ADL), and the Hip Outcome Score-Sport-Specific Subscale (HOS-SSS). Data on reoperation rates and progression to total hip arthroplasty were also extracted. The ROBINS-I tool was used to assess the risk of bias, and meta-analyses were performed using Review Manager. Three comparative investigations, comprising 808 patients (165 athletes and 643 non-athletes), met the inclusion criteria. Baseline characteristics were similar across both groups. The analyses demonstrated no statistically significant differences in the PROMs (VAS: $p = 0.7$; HOS-ADL: $p = 0.5$; HOS-SSS: $p = 0.4$), reoperation rates ($p = 0.7$), or the rate of progression to arthroplasty ($p = 0.4$) between athletes and non-athletes. Furthermore, meta-analyses of two studies reinforced the absence of significant differences in VAS and HOS-SSS outcomes.

Conclusion: Hip arthroscopy for FAI appears to yield equivalent improvements in pain and functional outcomes for both athletes and non-athletes, with comparable complication rates at an approximate two-year follow-up. Despite the limited number of studies and a moderate risk of bias, the findings support the effectiveness of arthroscopic intervention across varying physical activity levels.

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

PAPERTITLE	OPTIMIZING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE WITH EV GRID NET BY INTERNET OF THINGS AND MACHINE LEARNING STRATEGIES	
AUTHORS	RAMANI R, NALINI ANANDAN	
JOURNALNAME	SCALABLE COMPUTING: PRACTICE AND EXPERIENCE	
SNIP-NIL	IMPACTFATOR-NIL	INDEXED-SCOPUS



Ms.RAMANI R
(ECE)

ABSTRACT

In the arena of renewable energy integration for electric vehicle (EV) infrastructure, the challenge lies in efficiently integrating solar power with EV charging, considering grid constraints and user preferences. The current study proposes a new smart-charging algorithm that leverages IoT data to dynamically optimize EV charging patterns. A novel aspect of the study was a deep learning model, "EV Grid Net", that reliably predicts solar energy output and grid prices. EV Grid Net uses deep learning approaches to process accumulated data via IoT devices, facilitating fine-tuned adjustments to charging patterns through predictive analytics. This algorithm receives actual data on the generation of solar energy, the price of grid electricity, and other characteristics set by the user to optimize the usage of solar energy, limit the usage of grid electricity during the peak hours and meet all the needs of the user.} The optimization process of the algorithm strategically manages energy sources, uses battery storage systems to exploit solar power effectively and uses grid electricity during low-cost periods, all within user preference parameters. The proposed system has the potential of reducing grid electric use by up to 25% for EV charging, and increasing the renewable energy electricity in EV charging to 40% as per simulation results. This will enable quick EV infrastructure scalability, low carbon emission, and energy independence. EV Grid Net is an outstanding innovation in smart charging technology, which is a cost-effective and scalable solution to the renewable energy sector's primary challenge. One of the key aspects of the optimization process is the control of energy sources where battery storage systems allow for flexibility in using solar energy and grid electricity within certain pre-set thresholds.

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

PAPERTITLE	CNN-BASED PNEUMONIA DETECTION AND SEVERITY ANALYSIS IN CHEST X-RAY IMAGES FOR ENHANCED DIAGNOSTIC SUPPORT	
AUTHORS	D SURENDIRAN MUTHUKUMAR, BOMMINENI SREEKAR CHOWDARY, D SENTHIL KUMAR, P JAGADEESAN, B MYTHILI, SWAPNA B	
JOURNALNAME	2025 INTERNATIONAL CONFERENCE ON MULTI-AGENT SYSTEMS FOR COLLABORATIVE INTELLIGENCE (ICMSCI)	
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-SCOPUS



Dr.SWAPNA B
(ECE)

ABSTRACT

Pneumonia continues to pose a substantial global health challenge, necessitating prompt and precise diagnosis to enhance patient outcomes. In order to detect pneumonia and classify its severity into mild, moderate, and severe phases, the web-based program uses deep learning algorithms to analyse chest X-ray pictures. A Convolutional Neural Network (CNN) model that has been trained on publicly accessible datasets and achieved high accuracy is integrated into the application. Furthermore, it provides personalized health recommendations, downloadable PDF reports, and a local hospital database to facilitate users in locating nearby treatment facilities. The system utilizes Fast API for backend processing and user-friendly interfaces to enhance accessibility and efficiency. This solution underscores the potential of artificial intelligence in supporting early diagnosis and effective pneumonia management.

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

PAPERTITLE	EXPLORING THE THERAPEUTIC POTENTIAL OF LERIODENINE AND NUCIFERINE FROM NELUMBO NUCIFERA FOR RENAL FIBROSIS: AN IN-SILICO ANALYSIS		 Dr.S ANKUL SINGH (PHARMACY)
AUTHORS	RUSHENDRAN RAPURU, RUKAIAH FATMA BEGUM, S ANKUL SINGH, CHITRA VELLAPANDIAN, NEMAT ALI, ABDULLAH F ALASMARI, BHUPENDRA G PRAJAPATI		
JOURNALNAME	ZEITSCHRIFT FÜR NATURFORSCHUNG C		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-WOS/SCOPUS	

ABSTRACT:

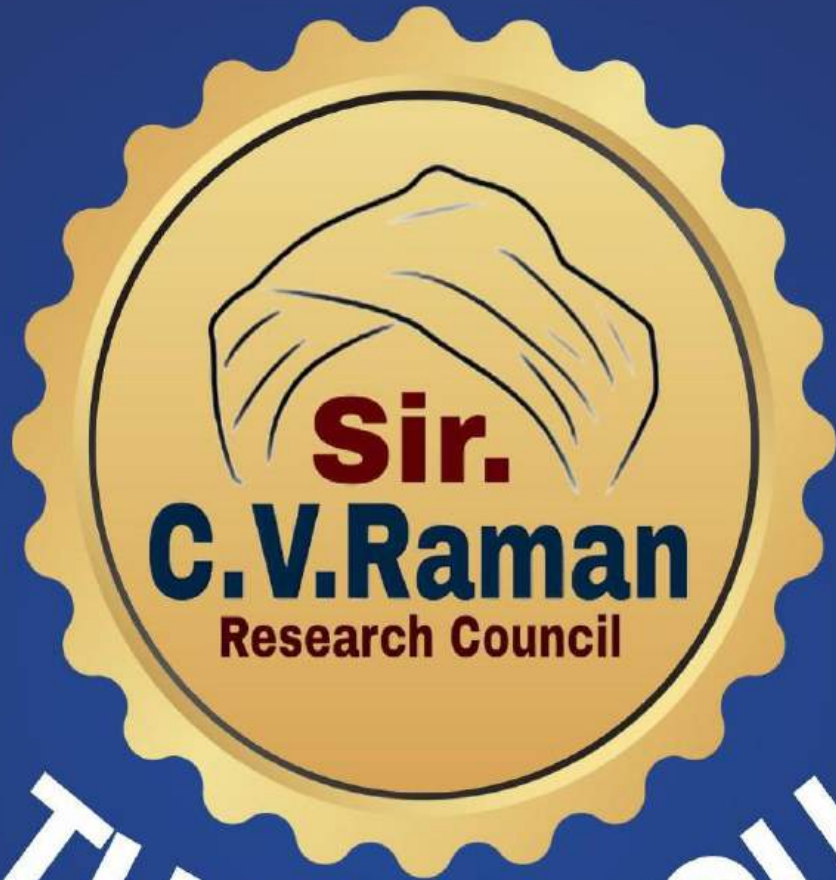
A major problem in chronic kidney illnesses is renal fibrosis. This research investigates the therapeutic potential of compounds derived from *Nelumbo nucifera* (Lotus). Comprehensive screening identified these compounds, which exhibit promising binding affinities with key targets associated with renal fibrosis. Leriodenine and Nuciferine demonstrate substantial potential by modulating critical targets such as PTGS2, JUN, EGFR, STAT3, mTOR, and AKT1. The identified biomolecule-target-pathway network highlights the intricate interactions underlying the therapeutic effects of lotus seed compounds in renal fibrosis. Strong binding affinities with PTGS2-PDBID:5F19, Leriodenine -8.99 kcal/mol, and Nuciferine -9.33 kcal/mol, and JUN-PDBID:1S9K, Leriodenine -7.95 kcal/mol, and Nuciferine -7.05 kcal/mol are shown by molecular docking investigations, indicating their potential as fibrotic process inhibitors. During 10 ns of molecular docking simulations, these compounds demonstrated robust hydrogen-bonding connections within the protein's active site, leading to a possible alteration in the conformation of the ligand-binding site. The research establishes the foundation for future experimental validation, clinical trials to bridge the translational gap. The research combines target prediction, protein-protein interaction studies, and biomolecular screening to clarify the molecular pathways behind renal fibrosis. We also carried out *Insilico* molecular docking and carried out molecular dynamics simulation of the best compound identified to obtain more precise results.

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

PAPERTITLE	STEM CELL THERAPY IN PARKINSON’S DISEASE: ADVANCES IN REGENERATIVE MEDICINE AND CLINICAL APPLICATIONS		
AUTHORS	DEVIKA SANIL KUMAR, ROGHINI RAVI, AMMAR ABDUL RAZZAK MAHMOOD, NASLET AMIRKHANYAN, GEORGIY POLEVOY.		
JOURNALNAME	GLOBAL JOURNAL OF MEDICAL, PHARMACEUTICAL, AND BIOMEDICAL UPDATE		
SNIP-NIL	IMPACTFACTOR-NIL	INDEXED-WOS	
			Dr. ROGHINI RAVI (ACSMCH)

ABSTRACT

Parkinson's disease (PD) is a neurodegenerative disorder characterized by the gradual loss of dopaminergic neurons in the substantia nigra, resulting in both motor and non-motor symptoms. The current treatment options, including medications and surgical procedures, primarily focus on symptom management without addressing the underlying progression of the disease. Stem cell therapy has emerged as a promising approach in regenerative medicine for PD, aiming to replace the damaged neurons, restore dopamine production, and enhance overall patient outcomes. Furthermore, the review discusses the latest developments in clinical trials, evaluating the therapeutic potential as well as the limitations of stem cell-based treatments. While preclinical studies have demonstrated encouraging results, the translation of these findings into effective clinical treatments remains a complex challenge. The diverse nature of PD, varying patient responses, and long-term safety concerns emphasize the need for ongoing research. This review provides an in-depth analysis of stem cell therapies in PD, addressing their therapeutic potential, sources, and reprogramming techniques. It critically examines key challenges such as graft purity, safety, immunological rejection, and complications like dyskinesia. By exploring advancements in neural and dental pulp stem cells, the review underlines the role of PD microenvironment in influencing outcomes and highlights cutting-edge reprogramming approaches, such as episomal and polycistronic vectors, and helps to gain a comprehensive understanding of current innovations, limitations, and future directions in stem cell-based treatments for PD.



THANK YOU