



**Dr. M.G.R.**  
**EDUCATIONAL AND RESEARCH INSTITUTE**  
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Periyar E.V.R. High Road, Maduravoyal, Chennai-95, Tamilnadu, India.

**.VIJAYA**



**MONTHLY APPRECIATION**  
**JUNE -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 **JUNE 2025**. We are also pleased to announce the “**STAR FIRST AUTHOR**” and “**STAR CO-AUTHOR**” of **JUNE 2025**.

|                                                                                     |                                                   |                                                             |                                                                                       |
|-------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    | <p><b>STAR FIRST AUTHOR<br/>(FA CATEGORY)</b></p> | <p><b>Dr. KESAVAN SUJATHA<br/>(EEE)</b></p>                 |    |
|  | <p><b>STAR CO-AUTHOR<br/>(CA CATEGORY)</b></p>    | <p><b>Dr. MADHAN JEYARAMAN<br/>(ACSMCH)</b></p>             |   |
|  | <p><b>STAR RESEARCH<br/>SCHOLAR/STUDENT</b></p>   | <p><b>Ms. DEEPTHI KALWA<br/>(COMPUTER APPLICATIONS)</b></p> |  |

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–JUNE 2025

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|-------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | AUTOMATED DIAGNOSIS OF PLUS DISEASE IN RETINOPATHY OF PREMATURITY BASED ON TRANSFORMER-BASED UNSUPERVISED CURRICULUM LEARNING |                    | <br>Ms.DEEPTHI KALWA<br>(CSE) |
| AUTHORS     | DEEPTHI KALWA, JOSEPHINE MARIA SUSAI, V JAYABALA RAJA.                                                                        |                    |                                                                                                                  |
| JOURNALNAME | BIOMEDICAL SIGNAL PROCESSING AND CONTROL                                                                                      |                    |                                                                                                                  |
| SNIP-1.65   | IMPACTFACTOR-4.9                                                                                                              | INDEXED-WOS/SCOPUS |                                                                                                                  |

### ABSTRACT:

Retinopathy of prematurity (ROP) is a serious ocular condition that predominantly impacts premature infants, with plus disease serving as a significant marker of its severity. Timely and accurate identification of plus disease is essential for effective intervention and the prevention of vision impairment. To overcome this issue, a novel Transformer-based Unsupervised Curriculum Learning model (TUCLM) is introduced for automatic diagnosis of plus disease. The proposed Transformer-based Unsupervised Curriculum Learning Model (TUCLM) is an advanced framework for automating the diagnosis of several diseases without the need for labelled training data. The unsupervised clustering component processes these features to group them into clusters and assigns pseudo-labels, facilitating a pseudo-supervised learning approach. The training method begins with the PRes-SE-att-ViT extracting features from retinopathy images. These features are then examined using an unsupervised clustering method, which categorizes similar features into distinct clusters. To enhance the quality of learning, the nearest neighbour of the centroid theory is used to identify reliable samples from each cluster. These selected samples are used to fine-tune the PRes-SE-att-ViT model. After fine-tuning, the model is reused to extract features from the complete dataset, which includes both reliable samples and additional images. The features are reclustered, pseudo-labels are updated, and reliable samples are reselected using the new clustering results. This iterative cycle of feature extraction, clustering, pseudo-labeling, and fine-tuning is repeated until the PRes-SE-att-ViT model reaches convergence. The experimental results demonstrate good results in detecting plus disease with an accuracy of 99.3%, a precision of 98.8%, a recall of 99.1%, and an F1-score of 99%.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

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| PAPERTITLE  | Integrative approaches in Alzheimer’s disease: evaluating the potential of traditional, complementary, and integrative medicine (TCIM) |                     | <br><br>Dr. SNEHA SRI S<br>(PHARMACY) |
| AUTHORS     | Sneha Sri R, Pavithra T, Vinciya T, Santhosh Kumar V, Harikrishnan N,Rukaiah Fatma Begum, Ankul Singh Suresh Pratap Singh.             |                     |                                                                                                                          |
| JOURNALNAME | FRONTIERS IN PHARMACOLOGY                                                                                                              |                     |                                                                                                                          |
| SNIP- 1.153 | IMPACTFACTOR- 4.8                                                                                                                      | INDEXED- SCOPUS/WOS |                                                                                                                          |

### ABSTRACT:

This review explores the potential of Traditional, Complementary, and Integrative Medicine (TCIM) as an adjunct to conventional therapies for Alzheimer's Disease (AD). Unlike pharmaceutical treatments that primarily offer symptomatic relief, TCIM encompasses holistic approaches that target multiple pathophysiological pathways involved in AD, including tau pathology, oxidative stress, mitochondrial dysfunction, and neuroinflammation. Herbal therapies such as *Withania somnifera*, *Ginkgo biloba*, and *Curcuma longa* have shown promising neuroprotective effects in preclinical and limited clinical studies. Mind-body practices like Kirtan Kriya meditation have also demonstrated stress-reduction benefits, addressing modifiable risk factors for AD. While current evidence highlights the potential of TCIM interventions to complement standard care, rigorous validation through high-quality randomized controlled trials remains essential. This review underscores the need for integrative, personalized approaches that synergize traditional and modern medical systems to enhance therapeutic outcomes in AD.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

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| PAPERTITLE  | CHALLENGES IN THE CLINICAL TRANSLATION OF STROMAL VASCULAR FRACTION THERAPY IN REGENERATIVE MEDICINE                                                    |                | <br>Dr MADHAN JEYARAMAN<br>(ACSMCH) |
| AUTHORS     | NAVEEN JEYARAMAN, SANDEEP SHRIVASTAVA, ARULKUMAR NALLAKUMARASAMY, SWAMINATHAN RAMASUBRAMANIAN, AVINASH GANDI DEVADAS, SECUNDA RUPERT, MADHAN JEYARAMAN. |                |                                                                                                                        |
| JOURNALNAME | WORLD JOURNAL OF STEM CEL                                                                                                                               |                |                                                                                                                        |
| SNIP-0.822  | IMPACTFACTOR-3.6                                                                                                                                        | INDEXED-SCOPUS |                                                                                                                        |

### ABSTRACT:

Stromal vascular fraction (SVF) therapy is a promising regenerative medicine strategy derived from adipose tissue, containing a heterogeneous mix of cells, including adipose-derived stem, endothelial, and immune cells. Despite its potential in treating conditions like osteoarthritis, chronic wounds, and myocardial ischemia, significant challenges impede its clinical translation. Key obstacles include biological variability in SVF composition, unclear mechanisms of action, regulatory ambiguities, and the technical difficulty of ensuring standardized and scalable isolation methods. Furthermore, patient-specific factors, ethical concerns, and the need for comprehensive efficacy assessment complicate clinical application. Addressing these challenges requires advancements in technology, regulatory flexibility, interdisciplinary collaboration, and personalized therapeutic approaches. Innovations such as automated isolation systems, advanced biomaterials, and CRISPR-based gene editing are potential solutions to improve the therapeutic reliability of SVF. A structured roadmap, including preclinical research, regulatory approval, and post-market surveillance, is proposed to advance SVF therapies from the laboratory to clinical practice. Future directions should focus on large-scale clinical trials, biomarker development, real-world evidence generation, and standardization of protocols to enhance the safety, efficacy, and accessibility of SVF, ultimately realizing its potential as a versatile therapeutic in regenerative medicine.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

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| PAPERTITLE  | Impact of Multispecies Biofilm on The Chemical and Mechanical Characteristics of Radicular Dentin from Diabetic and Non-Diabetic Patients: An In-Vitro Study |                | <br><b>Dr. KIRTANA GOPALASAMY (TMDCH)</b> |
| AUTHORS     | Kirtana Gopalasamy, Sridevi Krishnamoorthy, Jayalakshmi Somasundaram, Angambakkam Rajasekaran Pradeep Kumar, Anil Kishen                                     |                |                                                                                                                              |
| JOURNALNAME | JOURNAL OF ENDODONTICS                                                                                                                                       |                |                                                                                                                              |
| SNIP-1.944  | IMPACTFACTOR-3.6                                                                                                                                             | INDEXED-SCOPUS |                                                                                                                              |

### ABSTRACT:

This *in vitro* study examined the effect of a multispecies biofilm on the chemical characteristics and mechanical properties of root dentin from patients with or without type 2 diabetes mellitus (DM). Intact mandibular molars were obtained from diabetic and nondiabetic donors. Rectangular root dentin beams were prepared and categorized based on age (40–60 and 61–80 years), presence/absence of DM, and the site of dentin beam extraction (mesiodistal or buccolingual). Pentosidine, collagen cross-linking ratio, and mineral-to-collagen ratio were determined by Fourier transform infrared spectroscopy and fatigue resistance was evaluated by the four-point flexure to failure test with or without exposure to a multispecies biofilm for 21 days. DM and biofilm exposure significantly increased pentosidine, mineral-to-collagen ratio, and collagen cross-linking ratio in root dentin from both age groups ( $P < .05$ ). Control root dentin from the 61–80 years group had significantly lower fatigue resistance than root dentin from the 40–60 years group ( $P < .05$ ). DM reduced the fatigue resistance of root dentin but not significantly ( $P > .05$ ). After biofilm exposure, root dentin with DM had significantly lower fatigue resistance than root dentin without DM ( $P < .05$ ). Biofilm exposure significantly reduced the fatigue resistance of root dentin with or without DM when compared with the controls only in the 40–60 years group ( $P < .05$ ). Aging decreased the fatigue resistance of root dentin. DM and biofilm exposure increased pentosidine, mineral-to-collagen ratio, and collagen cross-linking in root dentin across both age groups. Biofilm exposure further reduced the fatigue resistance of root dentin with DM compared to root dentin without DM.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

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| PAPERTITLE  | Expert Panel Consensus Recommendations For Allergic Rhinitis In Patients With Asthma In India                                                                                                                                 |                    | <br><b>Dr.S BALAMURGAN</b><br>(ACSMCH) |
| AUTHORS     | R Narasimhan, Sitesh Roy, Meghanadh Koralla, P K Thomas, <b>S Balamurugan</b> , M Harish, Sabarinath Ravichandar, Pattabiraman, Dhanasekar R K, Shelley Shamim, Vijay K Singh, Sunil Janardanan Unnithan, Archana Karadkhele. |                    |                                                                                                                           |
| JOURNALNAME | PULMONARY THERAPY                                                                                                                                                                                                             |                    |                                                                                                                           |
| SNIP-0.982  | IMPACTFACTOR-3                                                                                                                                                                                                                | INDEXED-WOS/SCOPUS |                                                                                                                           |

### ABSTRACT:

Allergic rhinitis and asthma are commonly coexisting conditions, significantly impacting patient health and quality of life. Despite their interrelation, diagnosing allergic rhinitis in patients with asthma remains challenging, leading to underdiagnosis and suboptimal management. The expert consensus engaged a modified Delphi method involving 29 experts, including pulmonologists, ear, nose, and throat surgeons, and allergologists. Through group discussions, consensus statements were developed regarding the epidemiology, diagnosis, and management of allergic rhinitis and asthma. Final consensus statements were formulated based on the experts' collective clinical judgment and experience. This expert consensus provides updated recommendations tailored to the Indian context, addressing the gaps in existing research and clinical practice. By promoting a systematic and evidence-based approach to diagnosis and management, this consensus aims to support clinicians in effectively identifying and treating allergic rhinitis in patients with asthma, thereby improving overall disease management and patient well-being.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

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| PAPERTITLE  | Exploring The Potential Of Stem Cell Therapy: Applications, Types, And Future Directions                                                                    |                    | <br><br>Ms. B.KEERTHISHRI<br>(BIO-TECHNOLOGY) |
| AUTHORS     | Keerthishri Boopathy, Thirunavukkarasu Palaniyandi, Ravi M, Mugip Rahaman Abdul Wahab, Gomathy Baskar, Safia Obaidur Rab, Mohd Saeed, Vishal M Balaramnavar |                    |                                                                                                                                  |
| JOURNALNAME | ACTA HISTO-CHEMICA                                                                                                                                          |                    |                                                                                                                                  |
| SNIP-0.589  | IMPACTFACTOR-2.4                                                                                                                                            | INDEXED-WOS/SCOPUS |                                                                                                                                  |

### ABSTRACT:

One of the most significant treatment approaches now accessible is stem cell therapy. Over the last few decades, a lot of studies have been done in this field, and this fascinating feature of plasticity could have therapeutic uses. The potential of stem cells to restore function lost as a result of disease, trauma, congenital defects, and age has made stem cell research a key priority for scientific and medical organizations across the world. Stem cells are a crucial topic of study in regenerative medicine because of their capacity to replace, repair, or regenerate damaged cells, tissues, or organs. As a result, stem cell therapy is being used as a treatment strategy for many illnesses. Because stem cells may proliferate indefinitely and generate vast quantities of differentiated cells needed for transplantation, they hold enormous promise for regenerative medicine. Stem cells can be reprogrammed from adult cell types or originate from embryonic or fetal origins. Depending on their availability and place of origin, stem cells can be totipotent, pluripotent, multipotent, oligopotent, or unipotent. With stem cell treatment, many ailments, including diabetes, liver disease, infertility, wounds and traumas, neurological disorders, cardiovascular disease, and cancer, might be cured. Various types of stem cell treatment are described in this review along with their applications in different therapeutic fields, ethical considerations, and advantages and disadvantages.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

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| PAPERTITLE  | Hybrid deep learning approach for early detection and classification of plant diseases from aerial view of agricultural lands |                     | <br><br><b>Dr.K.SUJATHA<br/>(EEE)</b> |
| AUTHORS     | Kesavan Sujatha, N P G Bhavani, G Rohini, V Srividhya, A Ganesan                                                              |                     |                                                                                                                          |
| JOURNALNAME | PROCEEDINGS OF THE INDIAN NATIONAL SCIENCE ACADEMY.                                                                           |                     |                                                                                                                          |
| SNIP- 0.609 | IMPACTFACTOR- 2.1                                                                                                             | INDEXED- SCOPUS/WOS |                                                                                                                          |

### 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, image quality of the agricultural lands is improved through preprocessing techniques like noise reduction, gamma correction and white balancing. Data augmentation is incorporated to expand the dataset and improve the generalization capacity of the model. Efficient methods such as EfficientDet, Squeeze Net, colour and shape based features, are included in 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 (IWHO) 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 (RCNN) and Recurrent Neural Networks (RNN), Deep Neural Networks (DNN) and Bidirectional Long Short-Term Memory (Bi-LSTM) identifies the location and type of plant diseases. Finally, HOA integrated with MOA, TLBO, IWHO feature selection and CNN classifier is proposed for identification of plant diseases from the hyper spectral images. Gradient Descent (GD) method is used for weight adjustment to tune the hyper parameters so as to reduce the loss function. It is also implemented to avoid over fitting 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–JUNE 2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                        |                    |                                                                                                                    |
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| PAPERTITLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Decentralized Emission Inventories and Traffic Dynamics: A Comprehensive Study on PM2.5 and PM10 in the Road Sector of Greater Chennai |                    | <br>Dr.S LAXMI PRIYA<br>(CIVIL) |
| AUTHORS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | S Laxmipriya, M Naresh Babu, M Dinesh Babu, Yuvarajan Devarajan, J Jasmine Hephzipah                                                   |                    |                                                                                                                    |
| JOURNALNAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | AEROSOL SCIENCE AND ENGINEERING                                                                                                        |                    |                                                                                                                    |
| SNIP-0.652                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | IMPACTFACTOR-2                                                                                                                         | INDEXED-SCOPUS/WOS |                                                                                                                    |
| <b>ABSTRACT:</b><br><br>Postpartum depression is an important medical issue and a common problem of women which also has a significant impact on the emotional and cognitive development of the baby. Studies in India have noted the prevalence of postnatal depression ranging between 11%-26.3%. Methodology: The present study was carried out among 506 postnatal women registered in two urban field practice areas of Belagavi. A pre-tested, standard, structured questionnaire was provided to them. After obtaining informed consent, the participants were asked to fill in the questionnaire. The collected data was entered and analyzed in SPSS Version 26. Results: Most women belonged to the age group 25-29 years (33.20%). Majority were Muslim by religion (62.45%) and housewife by occupation (66.60%). Most of them initiated breast feeding within 30 minutes to 4 hours, majority of them practiced exclusive breast feeding, around 70% of them faced some difficulty in breast feeding. Around 11.07% of the women had Edinburg Postnatal Depression Scale score? 10. Edinburg Postnatal Depression Scale was found to be statistically significant with age, educational status, socio economic status, pregnancy planning, history of previous miscarriage/abortion, and difficulty in breast feeding. Many factors including breastfeeding is associated with postpartum depression. Early detection of mental health diseases is needed by training grassroot level staff with tools like Edinburgh scale to identify risk factors and integrating mental health activities into the routine antenatal care at primary level. |                                                                                                                                        |                    |                                                                                                                    |

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

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|-------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | Load-Bearing Characterization of Environment-Friendly Polyester Composite Rebar With Chopped Flax Fiber And Bagasse Biochar |                    | <br><br>Mr. M JONI<br>(CIVIL) |
| AUTHORS     | M Joni, Kavitha Thangavel, A Arun Kumar.                                                                                    |                    |                                                                                                                  |
| JOURNALNAME | TRANSACTIONS ON ELECTRICAL AND ELECTRONIC MATERIALS                                                                         |                    |                                                                                                                  |
| SNIP-0.66   | IMPACTFACTOR-1.9                                                                                                            | INDEXED-WOS/SCOPUS |                                                                                                                  |

### ABSTRACT

This study looks into the mechanical characteristics and environmental advantages of rebar composed of polyester resin, chopped flax fiber, and bagasse biochar. The main theme of the research is to create a lightweight, environmentally friendly substitute for conventional steel rebar by fusing these sustainable materials. According to the study's conclusions, the composite specimen N2 with 1% biochar has the best mechanical properties and is hence a good choice for use in rebar applications. Specifically, specimen N2 performed better than specimen N0, which was composed entirely of polyester resin in terms of compressive strength (76.12 MPa), flexural strength (100.48 MPa), and tensile strength (59.24 MPa). The increases shown in these values are 33.57%, 39.57%, and 33.35%. The increased mechanical properties can be attributed to the biochar's strength, stability, and durability, as well as the addition of flax fiber. In contrast, N4, which had 5 vol% biochar, had the highest hardness value of 82.68 shore-D, which was 19.67% higher than sample N. With a 124.90% increase in thermal conductivity, specimen N4 has the greatest thermal conductivity value of 0.578 W/m K. Additionally, the composite specimen N4 shows the lowest flammability (7.12 mm/min) and water absorption percentage (0.001%), indicating the low flammability and decreased corrosion of the biochar. According to the research, this novel composite rebar has the potential to significantly advance the use of renewable resources in the construction sector and support sustainable building practices.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

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| PAPERTITLE  | Effect Of Granulocyte Colony-Stimulating Factor (G-Csf) On The Functional Outcome Of Acute Spinal Cord Injury Patients: A Single-Blind Randomized Controlled Trial |                    | <br>Dr. NAVEEN JEYARAMAN (SLMCH) |
| AUTHORS     | Prabu Mounissamy, Premraj A C, Sushma Chanadrashekar, Naveen Jeyaraman, Swaminathan Ramasubramanian, Madhan Jeyaraman                                              |                    |                                                                                                                     |
| JOURNALNAME | JOURNAL OF ORTHOPAEDICS                                                                                                                                            |                    |                                                                                                                     |
| SNIP-0.848  | IMPACTFACTOR-1.5                                                                                                                                                   | INDEXED-WOS/SCOPUS |                                                                                                                     |

### ABSTRACT

Spinal Cord Injury (SCI) is a major public health issue causing significant disability and economic burden. Current treatments primarily focus on mitigating secondary injury, with limited effective therapies available. This study explores the efficacy of the Granulocyte Colony-Stimulating Factor (G-CSF) in improving functional outcomes in acute SCI patients. This single-blinded randomized controlled trial was conducted at JIPMER's orthopaedics department. Patients with acute spinal cord injury (SCI) were enrolled based on specific inclusion and exclusion criteria. Participants were divided into two groups: Group A (n = 16) received a G-CSF injection, whereas Group B (n = 18) received a placebo (normal saline) injection. The primary evaluation was based on the changes in the ASIA impairment scale at 1-, 3-, and 6-month post-injury. The study involved 34 participants, predominantly male. Initial assessments showed significant differences in ASIA scores between the groups. Group A demonstrated marked improvement in neurological status at 1, 3, and 6 months post-treatment compared to Group B. The frequency of adverse events was comparable between the two groups. G-CSF showed significant improvement in ASIA scores at various time points post-administration compared to placebo. These findings suggest G-CSF as a potential therapeutic agent in acute SCI treatment. However, due to the small sample size, further research is necessary to confirm these results.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

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|--------------|-------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------|
| PAPERTITLE   | Breastfeeding and postpartum depression among women in urban field practice areas of Belagavi – A cross-sectional study |                    | Dr. SRIRAM T R<br>(SLMCH) |
| AUTHORS      | Asha Anil Bellad,Hemavathe Sivaji, Sriram T R, Vignesh V N                                                              |                    |                           |
| JOURNAL NAME | INDIAN JOURNAL OF COMMUNITY HEALTH                                                                                      |                    |                           |
| SNIP-0.765   | IMPACTFACTOR-1.3                                                                                                        | INDEXED-SCOPUS/WOS |                           |

### ABSTRACT:

Postpartum depression is an important medical issue and a common problem of women which also has a significant impact on the emotional and cognitive development of the baby. Studies in India have noted the prevalence of postnatal depression ranging between 11%-26.3%. Methodology: The present study was carried out among 506 postnatal women registered in two urban field practice areas of Belagavi. A pre-tested, standard, structured questionnaire was provided to them. After obtaining informed consent, the participants were asked to fill in the questionnaire. The collected data was entered and analyzed in SPSS Version 26. Results: Most women belonged to the age group 25-29 years (33.20%). Majority were Muslim by religion (62.45%) and housewife by occupation (66.60%). Most of them initiated breast feeding within 30 minutes to 4 hours, majority of them practiced exclusive breast feeding, around 70% of them faced some difficulty in breast feeding. Around 11.07% of the women had Edinburg Postnatal Depression Scale score? 10. Edinburg Postnatal Depression Scale was found to be statistically significant with age, educational status, socio economic status, pregnancy planning, history of previous miscarriage/abortion, and difficulty in breast feeding. Many factors including breastfeeding is associated with postpartum depression. Early detection of mental health diseases is needed by training grassroot level staff with tools like Edinburgh scale to identify risk factors and integrating mental health activities into the routine antenatal care at primary level.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

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| PAPERTITLE  | Enhanced Monitoring of Pyruvate Kinase Disease for Red Blood Cells Using an Optimized Global Aware Siamese Network |                    | Mr.R PRASANNA KUMAR<br>(AI & DS) |
| AUTHORS     | Gunasekaran Brindha, P Prabakaran, R Prasanna Kumar, G Keerthiga                                                   |                    |                                  |
| JOURNALNAME | IETE JOURNAL OF RESEARCH                                                                                           |                    |                                  |
| SNIP-0.765  | IMPACTFACTOR-1.3                                                                                                   | INDEXED-SCOPUS/WOS |                                  |

### ABSTRACT:

The use of microfluidics in large-scale biological experiments is highly promising. However, the challenge of maintaining the large volume of information available often prevents its widespread use. The input video is collected from the Real dataset using a Zeiss microscope and a Zeiss Axiocam 503 mono camera. Initially, the input video is preprocessed using an Inverse Extended Kalman Filter (IEKF) to remove the needless noise. The pre-processed video is fed to the Simple Contrastive Graph Clustering (SCGC) for video segmentation to identify the Region of Interest (ROI) in the video. Then, feature extraction is done by Generalized Transient-Squeezing Transform (GTST) to extract the statistical features, such as Contrast, Entropy, Kurtosis, and Correlation. Finally, the extracted features are supplied to the Global Aware Siamese Network (GASN) to identify the Red Blood Cells (RBC) in Pyruvate Kinase Disease (PKD), such as healthy and unhealthy. Generally, GASN does not adopt any optimization methods to determine optimal parameters to ensure accurate classification. Therefore, the Lotus Effect Optimization Algorithm (LEOA) is proposed in this work to optimize the weight parameter of GASN that accurately identifies the RBCs in Pyruvate Kinase disease. The proposed approach is executed, and its performance is examined using metrics such as accuracy, precision, recall, and F1-score. The proposed approach attains 36.64%, 33.87, and 31.56% better accuracy; 28.59%, 33.47%, and 27.53% better precision; 29.89%, 32.66, and 34.93% better recall compared with existing models, respectively.

| Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                         |                    |                                                                                                                 |
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| PAPERTITLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Enhancing Tool Life in End Milling of Martensitic Stainless-Steel Custom 450 Through Deep Cryogenic Treatment: Wear Analysis And Performance Evaluation |                    | <br><br>Dr. DEVI C<br>(MECH) |
| AUTHORS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Siva Kumar Mahalingam, Devi C, Lenin Nagarajan, Rajesh Durvasulu                                                                                        |                    |                                                                                                                 |
| JOURNALNAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SURFACE REVIEW AND LETTERS                                                                                                                              |                    |                                                                                                                 |
| SNIP-0.518                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | IMPACTFACTOR-1.2                                                                                                                                        | INDEXED-SCOPUS/WOS |                                                                                                                 |
| <p><b>ABSTRACT:</b></p> <p>This paper aims to assess how deep cryogenic treatment affects tool wear during the end milling of martensite stainless steel Custom 450. The tungsten carbide inserts are cryogenically treated after 24h. Wear tests are carried out under dry cutting conditions with three cutting speeds ranging from 75m/min, 115m/min, and 155m/min; a feed rate ranging from 0.1 to 0.2 mm/tooth; and a constant depth of cut of 0.5mm. The wear test findings demonstrated the crater and flank wear using cryo-treated inserts for 24 h. Conversely, we measure output responses like surface roughness (SR), cutting temperature (CT), and cutting force (CF). Cutting inserts that are cryogenically treated for 24h on average exhibit superior wear resistance compared to untreated cutting inserts. The confirmation experiment for the 24h cryo-treated tool inserts showed predicted values of CF, SR, and TT as 153.66N, 0.2724μm, and 330.45°C, respectively, with errors within 3%. For cryo-treated inserts, the experimental values were 154.28 N, 0.2938μm, and 332.98°C, with percentage deviations of −0.403%, −7.856%, and −0.765%, respectively.</p> |                                                                                                                                                         |                    |                                                                                                                 |

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

|             |                                                                                                                                 |                    |                                                                                     |
|-------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------|
| PAPERTITLE  | Periarticular Injections For Post-Surgical Analgesia In Shoulder Surgeries: A Systematic Review Of Literature And Meta-Analysis |                    |  |
| AUTHORS     | Thamizhmathi Thangaraju, Girinivasan Chellamuthu, Niranjni Sivados, Lakshmi Ramakrishnan, Madhan Jeyaraman                      |                    |                                                                                     |
| JOURNALNAME | INDIAN JOURNAL OF ORTHOPAEDICS                                                                                                  |                    |                                                                                     |
| SNIP-0.69   | IMPACTFACTOR-1.1                                                                                                                | INDEXED-WOS/SCOPUS | Dr. MADHAN JEYARAMAN (ACSMCH)                                                       |

### ABSTRACT:

Periarticular injections (PAI) are emerging as an effective pain control modality following shoulder surgery. Our objective was to summarize the evidence regarding the effectiveness of PAI in controlling postoperative shoulder pain. Comparative studies involving PAI with injections at more than one site in or around the shoulder were included. The comparator was a single-shot regional block or placebo. Databases screened include PubMed, Embase, Scopus, Cochrane, the Web of Science, Clinical Trial Registry—India, and Clinical Trials.gov. Eight studies were included in this meta-analysis. Six studies compared PAI with different blocks. Two studies compared the use of PAI as an adjuvant to routine anesthesia. There were 373 patients in the PAI group and 365 patients in the control arm. The mean pain scores in the post-anaesthetic care unit were pooled and compared. In the quantitative analysis using a random-effects model, two studies were found to be outliers. In the sensitivity analysis excluding them, the TOST test for equivalence of interventions was significant ( $Z = 1.685, p = 0.046$ ), suggesting the non-inferiority of PAI. The early results of PAI as a pain control modality after shoulder surgery are comparable to those of conventional blocks. A cocktail of drugs has been used. They are relatively inexpensive and safe. However, larger studies with standardized PAI drugs and protocols are needed to make further recommendations regarding their use.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

|             |                                                                                                                   |                     |                                                                                                                     |
|-------------|-------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | Prevalence and Impact of Musculoskeletal Occupational Injuries among Orthopedic Surgeons: A Cross-Sectional Study |                     | <br>Dr. NAVEEN JEYARAMAN (SLMCH) |
| AUTHORS     | Sathish Muthu, Girinivasan Chellamuthu, Akilan Chinnappan, Srujun Vadranapu, Naveen Jeyaraman, Madhan Jeyaraman   |                     |                                                                                                                     |
| JOURNALNAME | INDIAN JOURNAL OF ORTHOPAEDICS                                                                                    |                     |                                                                                                                     |
| SNIP- 0.69  | IMPACTFACTOR- 1.1                                                                                                 | INDEXED- SCOPUS/WOS |                                                                                                                     |

### ABSTRACT:

Occupational musculoskeletal injuries (MSOI) are a significant concern among orthopedic surgeons due to the demanding nature of their profession. Existing guidelines for ergonomic practices often face implementation challenges, resulting in heightened injury prevalence. This study aimed to determine the prevalence and characteristics of MSOI among orthopedic surgeons, focusing on their impact on surgical practice and overall well-being. A cross-sectional survey invited 5000 orthopedic surgeons, of whom 15.84% ( $n = 792$ ) successfully participated. Data included demographic information, work practices, subspecialties, and injury patterns. Injury severity and response were analyzed using descriptive statistics. Respondents were predominantly male (98.9%) with a mean age of 31.4 years. The majority (84.1%) were early career surgeons (<5 years of practice), and 73.8% worked in teaching institutions. Weekly surgical load varied, with 39.8% operating <12 h and 21.6% operating >36 h. Injuries predominantly affected the lower back (58%) and neck (47.7%), with an average involvement of 2.4 regions per surgeon. Despite 85.2% reporting injuries, only 13.6% sought treatment, primarily physiotherapy. Work absenteeism was reported by 6.8%, while 17% reduced surgical load for recovery. Notably, 37.5% perceived a lasting impact on career performance. MSOI among orthopedic surgeons is prevalent and significantly affects surgical practice and daily activities. These findings emphasize the need for targeted interventions to improve ergonomic awareness and reduce occupational risks.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                           |                     |
|-------------|-------------------------------------------------------------------------------------------|---------------------|
| PAPERTITLE  | Automated Steel Surface Defect Detection using Optimized Cascaded CaffeNet Region Network |                     |
| AUTHORS     | Kesavan Sujatha, Vijayagowri G, Ponmagal R S, Bhavani N P G                               |                     |
| JOURNALNAME | EVERGREEN                                                                                 |                     |
| SNIP- 0.69  | IMPACTFACTOR- 1.1                                                                         | INDEXED- SCOPUS/WOS |



Dr.K. SUJATHA  
(EEE)

### ABSTRACT:

Only a small number of low-resolution images are available to address the fundamental difficulties in defect detection during steel sheet manufacture, which results in less-than-ideal recognition accuracy and overall deep learning algorithm performance. A deep learning-based approach for detecting steel surface flaws is described in this paper. A new Optimized Cascaded CaffeNetRegion Network (OCAFRN) is utilized to detect defects from surveillance cameras by utilizing vision machine technology. By mapping the features using R-CNN and the Electric Fish Optimization Approach (EFOA), this cascaded structure with a 3D CaffeNet is utilized to extract the region of the steel sheets with faults. It outperforms the other standard algorithms in terms of recognition accuracy, which is consistent and comprehensive for both positive and negative categories under a variety of scenarios. In contrast, OCAFRN, which is an improved network model, exhibits optimal performance for smaller image models, achieving 96.5% of defect detection accuracy with a reduction in 3.2% of Mean Absolute Error (MAE) in comparison with the existing methods like Principal Component Analysis (PCA), Linear Discriminant Analysis (LDA), Back Propagation Algorithm (BPA) and Radial Basis Function Network (RBF).

| Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                              |                     |                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------|
| PAPERTITLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Tumour Budding with Epithelial-Mesenchymal Transition Markers – A Novel Prognostic Tool for Breast Carcinoma |                     | Dr.PRIYADHARSHINI KUMAR (ACSMCH) |
| AUTHORS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Priyadharshini Kumar, MeghashreeVishwanatha, Saranyabai Selvaraj.                                            |                     |                                  |
| JOURNALNAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | JOURNAL OF MID-LIFE HEALTH                                                                                   |                     |                                  |
| SNIP-0.64                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | IMPACTFACTOR- 1                                                                                              | INDEXED- SCOPUS/WOS |                                  |
| <div>ABSTRACT</div> <p>Breast cancer is a leading cause of cancer-related deaths among women worldwide. Before metastasis, carcinomas undergo epithelial–mesenchymal transition (EMT), a process wherein cancer cells acquire mobility, form tumour buds (TBs), and invade the stroma. The presence and number of TBs are directly proportional to tumour invasion and metastasis. By scoring TBs and using immunohistochemistry (IHC) to detect the EMT process, we can identify patients with poor prognosis after surgical resection. This enables early recognition of patients requiring aggressive treatment and follow-up. This study aimed to propose an algorithm for measuring TB and to establish the correlation between TB with EMT markers expression and main clinical parameters.A retrospective analytical study in an urban tertiary health care centre involving 47 cases of invasive breast carcinomas. TB was assessed in Haematoxylin &amp;Eosin stained tissue sections, followed by IHC with EMT markers. The association between TB, EMT markers, and main clinical parameters was statistically analysed using the Chi-square test.Among 47 cases, 30 had a mean-low TB score (<math>\leq 4/10</math>HPF) and 17 had a mean-high TB score (<math>&gt;4/10</math> HPF). Tumours with high TB scoring showed strong SNAIL, TWIST, and N-cadherin expression. Tumours with low TB scores showed high E-cadherin expression and low SNAIL, TWIST, and N-cadherin expression.The study established a positive correlation between TB and EMT markers. High TB scores are significantly associated with lymphovascular invasion, lymph node metastasis, and higher tumor grading. Using TB score and EMT markers in breast cancer management can facilitate patient-centered approach.</p> |                                                                                                              |                     |                                  |

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                          |                    |                                                                                                                        |
|-------------|----------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | Evaluation of quality of life in type-2 diabetes with other comorbid conditions: a cross-sectional study |                    | <br>Dr. SREYA KOSANAM<br>(PHARMACY) |
| AUTHORS     | Sreya Kosanam, Nithya Varadarajan, Aman Suresh T, Hari Chandana Varikallu, M Sai Sruthi.                 |                    |                                                                                                                        |
| JOURNALNAME | Discover Public Health                                                                                   |                    |                                                                                                                        |
| SNIP-0.451  | IMPACTFACTOR-0.7                                                                                         | INDEXED-WOS/SCOPUS |                                                                                                                        |

### ABSTRACT

The objective of this research was to compare the quality of life for diabetics and other co-morbidities (DM with Hypertension, DM with Thyroid Disease, DM with Kidney Disease, and DM with Cancer). A cross-sectional descriptive study was conducted at tertiary care hospitals in Andhra Pradesh, India, which included three study centers to assess the QoL of patients with T2DM. Quality of life (QoL) was assessed using the patient demographic details, family history, and laboratory parameters (BP, GRBs, and HbA1c). Short Form-36 (SF-36) questionnaire. Informed consent was obtained from the patient, and the SF36 score was calculated using the SF-36 score calculator. The QoL of the comorbidity group was compared with that of diabetes patients with no comorbidities. A total of 250 subjects were included from age groups of > 18 years and < 85 years. Most of them were in the age group of 40 to 64. The QoL in patients with diabetes alone was higher (54.26%) than that in patients with diabetes and kidney disease (53.21%), diabetes with hypertension (52.16%), and diabetes with thyroid (43.16%), whereas diabetes with cancer had a very low QOL (39.5%). According to 8 parameters included in SF 36, diabetes patients have a high Quality of Life (QOL) (54.26%) in Physical functioning (PF), role-physical (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role-emotional (RE), and mental health (MH). We observed a positive impact on QOL (53.15%) in patients with Diabetes (DM), other co-morbid conditions had equal QOL (52.16%), even though some of the variables that were related to QOL (such as age, gender, and ethnicity) cannot be changed.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                                  |                     |                                                                                                                                  |
|-------------|------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | How I Do It: A Novel Technique Using Customised Intravenous Tube Grommets for Management of Auricular Pseudocyst |                     | <br><b>Dr. RAJENDRAN DINESH KUMAR (RRMCH)</b> |
| AUTHORS     | Nagalingeswaran Ahilasamy, L Jagadeesh Marthandam, Rajendran Dinesh Kumar, Riya Yashpal Jain, S Hanish.          |                     |                                                                                                                                  |
| JOURNALNAME | INDIAN JOURNAL OF OTOLARYNGOLOGY AND HEAD AND NECK SURGERY                                                       |                     |                                                                                                                                  |
| SNIP- 0.475 | IMPACTFACTOR- 0.4                                                                                                | INDEXED- SCOPUS/WOS |                                                                                                                                  |

### ABSTRACT:

Auricular pseudocyst is a benign condition involving serous fluid accumulation between the auricular cartilage and perichondrium, with unclear etiology. It often starts as a painless swelling but can lead to complications like perichondritis and cauliflower ear if untreated. Prompt surgical management is crucial to prevent these outcomes. This article introduces a novel technique using customized IV set tubing grommets for drainage, based on 12 years of clinical experience with 45 cases. To describe a simple, cost-effective, and reproducible technique for the management of pseudocyst of the pinna using customised grommets fashioned from intravenous (IV) tubing. A retrospective analysis of 45 male patients with pseudocyst of the pinna treated between 2012 and 2024 using a novel drainage method involving IV tube grommets. The technique involves local anaesthesia, incision, drainage of serous fluid, insertion of a customised pre-sterilised IV tube grommet, and postoperative dressing. All patients had rapid resolution of fluid collection, excellent skin approximation, restored vascularity, and no recurrence. No complications such as perichondritis or scarring were noted. The technique described is a simple, effective, and economical alternative to traditional methods for managing auricular pseudocyst, suitable for use in resource-limited setting.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

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|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | A Clinico-Microbiological Comparison Of Antibacterial-Coated And Non-Coated Polyglactin 910 Sutures In Extraction Sockets: Prospective, Split-Mouth, Randomized, Triple-Blinded Study |                    | <br><br>Dr. AMAR SINGH<br>(TMDCH) |
| AUTHORS     | Amar Singh, Vandana Shenoy K, Janani Ravindranath, Gayathri Gopi, Mohamed Afradh K.                                                                                                   |                    |                                                                                                                      |
| JOURNALNAME | JOURNAL OF MAXILLOFACIAL AND ORAL SURGERY                                                                                                                                             |                    |                                                                                                                      |
| SNIP-0.792  | IMPACTFACTOR-0.6                                                                                                                                                                      | INDEXED-WOS/SCOPUS |                                                                                                                      |

### ABSTRACT

Despite being a ubiquitous procedure in oral surgery, tooth extraction, including impacted third molars, carries the potential for postoperative complications such as suture site infections (SSIs). These SSIs occur with a frequency of approximately 5% and typically fall within the “clean-contaminated” surgical category, where triclosan-coated sutures have demonstrated a reduction in incidence. However, the intraoral environment presents a unique microbial landscape, raising the question of whether these benefits translate to the specific context of extraction sockets. Therefore, this investigation aims to conduct a comparative analysis, examining both clinical and microbiological aspects, to evaluate the antibacterial efficacy of plain polyglactin 910 sutures and triclosan-coated polyglactin 910 sutures in extraction sockets post-surgery. Assessing effectiveness of triclosan sutures in reducing suture site infections, a split-mouth study was conducted with 111 patients undergoing multiple extractions (222 sites). Each patient received triclosan suture on one site and plain suture on the other. Suture handling, infection rates, pain levels, and healing were evaluated on days 3 and 7 post-extraction. Bacteria on the sutures were also identified and quantified. The study found that triclosan-coated sutures significantly improved socket healing, reduced suture site infections (SSIs), and decreased bacterial colonization compared to plain polyglactin 910 sutures on day 3 when compared to day 7. The study suggests that triclosan’s antibacterial properties reduce bacterial colonization on sutures, leading to improved clinical outcomes. This study demonstrates triclosan-coated sutures reduced infection and inflammation in dental extractions compared to conventional sutures, likely due to decreased bacterial colonization.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                                                        |                    |                                                                                     |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------|
| PAPERTITLE  | Brain Tumor Prediction Via Modified Deep Convolutional Alexnet With Transfer Learning With Color, Texture, And Statistical Feature Set |                    |  |
| AUTHORS     | Chiranjeevi Kothapalli, George Victo Sudha George                                                                                      |                    |                                                                                     |
| JOURNALNAME | BIOMEDICAL ENGINEERING: APPLICATIONS, BASIS, AND COMMUNICATIONS                                                                        |                    |                                                                                     |
| SNIP-NIL    | IMPACTFACTOR-NIL                                                                                                                       | INDEXED-WOS/SCOPUS |                                                                                     |
|             |                                                                                                                                        |                    | Dr. CHIRANJEEVI KOTHAPALLI (CSE)                                                    |

### ABSTRACT:

A brain tumor is a gathering of abnormal cells in the brain, forming a mass. In 2018, approximately 80,000 new instances of primary brain tumors were documented. Certain types of imaging modalities may not offer comprehensive details about all abnormal tissues, given the diverse biological composition present in tumors. In such a perspective, a novel Modified Deep Convolutional Alex Net with Transfer Learning (MDCATL) model is proposed, which uses brain Magnetic Resonance Imaging (MRI) images to predict the brain tumor. This MDCATL model operates through four essential stages: preprocessing, segmentation, feature extraction, and prediction. First, the CLAHE approach is used for preprocessing the input brain MRI images. After that, the Hybrid Loss-based U-Net (HL-UNet) model is used to segment the preprocessed image. Subsequently, features encompassing color, texture, and statistical aspects are extracted from the segmented image. The Modified Deep Convolutional Alex Net model then utilizes these features to predict brain tumors on the input brain MRI images. Consequently, the MDCATL model effectively predicts brain MRI images through Transfer Learning across these stages. Furthermore, the efficiency of the proposed MDCATL framework is evaluated through various metrics like accuracy, precision, FNR, F-measure, etc. Our proposed MDCATL model achieves 0.944 at a learning percentage of 90, while existing state-of-the-art models and traditional classifiers, such as Alex Net, Efficient Net, Vision transformer, CNN, CNN-LSTM, LSTM, ResNet, and Dense Net, exhibited lower accuracy values.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION-JUNE 2025

|              |                                                                                                                                                                                      |                |                                                                                                                  |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE   | Examining The Relationship Between Corporate Social Responsibility And Financial Performance Through A Comprehensive Correlational Study On Organizational Impact And Sustainability |                | <br>Ms.DRISHYA DARWIN<br>(IT) |
| AUTHORS      | G Pandi Selvi, Avick Kumar Dey, Mohana Opesh, Drishya Darwin.                                                                                                                        |                |                                                                                                                  |
| JOURNAL NAME | AIP CONFERENCE PROCEEDINGS                                                                                                                                                           |                |                                                                                                                  |
| SNIP-0.204   | IMPACTFACTOR-NIL                                                                                                                                                                     | INDEXED-SCOPUS |                                                                                                                  |

### ABSTRACT:

This study examines the association between Corporate Social Responsibility (CSR) and financial success via an extensive examination. business Social Responsibility (CSR) has transitioned from a volunteer endeavour to a fundamental strategic component, influencing business sustainability, stakeholder relationships, and profitability. In recent years, corporations have progressively incorporated Corporate Social Responsibility (CSR) into their operations, propelled by heightened consumer awareness, regulatory restraints, and investor demand for ethical business practices. This research examines the influence of Corporate Social Responsibility (CSR) on essential financial indicators, including Return on Assets (ROA), Return on Equity (ROE), and profit margins, emphasising sustainability as a mediating factor in this correlation. The study approach employs a correlational research strategy, using quantitative data from CSR reports, financial statements, sustainability rankings, and stakeholder surveys of 200 publicly listed firms across diverse industries. The results indicate a substantial positive association between corporate social responsibility (CSR) and financial success, especially in sectors such as consumer products and technology. Organisations that prioritise ethical sourcing, environmental sustainability, and community involvement often achieve greater profitability and enhanced stakeholder relationships. The research emphasises sector-specific differences, indicating that industries with increased environmental risks, including energy and manufacturing, gain the most from sustainability-oriented CSR programs.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                                            |                |                           |
|-------------|----------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------|
| PAPERTITLE  | PROTECTIVE EFFECTS OF STRYCHNOS POTATORUM SEED EXTRACT ON DIABETIC NEPHROPATHY IN RATS: DOWNREGULATION OF FSP-1 EXPRESSION |                | Mr.JONES EBEN RAJ T (AHS) |
| AUTHORS     | ABARAJITHA SHANKARANARAYANAN, MANICKAM SUBRAMANIAN, JONES EBEN RAJ T, SENTHIL KUMAR ANBUMANI.                              |                |                           |
| JOURNALNAME | JOURNAL OF APPLIED PHARMACEUTICAL SCIENCE                                                                                  |                |                           |
| SNIP-NIL    | IMPACTFACTOR-NIL                                                                                                           | INDEXED-SCOPUS |                           |

### ABSTRACT:

Diabetic nephropathy (DN), a complication of diabetes mellitus, is the primary cause of chronic kidney disease. Fibroblast-specific protein-1 (FSP-1) is a key protein involved in renal fibrosis through the epithelial-mesenchymal transition. *Strychnos potatorum*, a plant with various health benefits, has been studied for its potential to modulate FSP-1 expression in diabetic nephropathic rats. Thirty adult male Wistar albino rats were divided into five groups and treated with an ethanolic extract of *S. potatorum* seeds (500 mg/kg) and metformin (50 mg/kg) for 30 days. Biochemical parameters, renal histopathology, and FSP-1 immunohistochemistry, gene, and protein expressions were analyzed. The *S. potatorum*-treated group showed serum creatinine, urea, blood urea nitrogen, and glucose values of  $0.70 \pm 0.06$ ,  $39 \pm 1.41$ ,  $19.31 \pm 0.38$ , and  $144.67 \pm 8.71$  mg/dl, respectively, which were significantly lower than those in the untreated diabetic group. Excessive collagen deposition, atrophied renal tubules, and perivascular fibrosis observed in diabetic animals were attenuated in the *S. potatorum*-treated group. The gene and protein expression of FSP-1 was significantly reduced in the *S. potatorum*-treated group compared to that in the untreated diabetic animals. *Strychnos potatorum*, by attenuating the expression of FSP-1, has arrested the epithelial-mesenchymal transition and restored the normalcy of the podocyte's slit diaphragm. *Strychnos potatorum*'s modulatory effect on FSP-1 could be attributed to its antioxidant and anti-inflammatory activities. *Strychnos potatorum* seeds could be a promising drug for the treatment of DN pending clinical trials.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|              |                                                                                                                                |                |                                                                                                                                |
|--------------|--------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE   | Enhancing pedagogical practice through immersive technology with the transformation of classrooms with AR                      |                | <br><br>Ms. BENILA SELVA VINCY<br>(ENGLISH) |
| AUTHORS      | Ergashev Bunyod Shokir Ugli, Benila Selva Vincy Vincent Raj Gnana Selvam, B Lakshmikantham, Mamasidikova Naima Tokhirjon Kizi. |                |                                                                                                                                |
| JOURNAL NAME | AIP CONFERENCE PROCEEDINGS                                                                                                     |                |                                                                                                                                |
| SNIP-0.204   | IMPACTFACTOR-NIL                                                                                                               | INDEXED-SCOPUS |                                                                                                                                |

### ABSTRACT

The use of immersive technology, especially Augmented Reality (AR), is transforming teaching methods by establishing dynamic and interactive learning spaces. This study investigates how augmented reality (AR) improves instruction by fusing virtual and actual classroom environments, providing students with a more personalized and engaging learning environment. Teachers can convert standard instruction into immersive, multi-sensory lessons that promote greater learning and recall of difficult subjects by incorporating augmented reality (AR) into their curricula. The study examines various AR applications in education and demonstrates their effects on knowledge retention, collaborative learning, and student engagement. There is also a discussion of difficulties such as affordability, accessibility, and the need for teacher training. According to the research, augmented reality (AR) has the power to completely transform classrooms by increasing student engagement, personalisation, and adaptability to their unique needs. This will eventually boost pedagogical efficacy and spur innovation in the field of education.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|              |                                                                                               |                 |                                                                                                                           |
|--------------|-----------------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE   | Adsorption of Cr6+ and rhodamine 6G dye by modified silk fibroin: a comparative kinetic study |                 | <br>Dr.NIRMALA KRISHNAN<br>(CHEMISTRY) |
| AUTHORS      | Anbarasan Ramasamy, Nirmala Krishnan, Agathian Kandhan, Meenarathi Balakrishnan               |                 |                                                                                                                           |
| JOURNAL NAME | POLYMER BULLETIN                                                                              |                 |                                                                                                                           |
| SNIP-NIL     | IMPACTFACTOR-NIL                                                                              | INDEXED- SCOPUS |                                                                                                                           |

### ABSTRACT

The current scenario shows the need of low-cost adsorbent with improved thermal and antimicrobial properties. The waste discarded, and low-quality silk fibre satisfies the above requirements to some extent. The adsorption capacity of silk fibroin was increased by altering its structure chemically.  $\epsilon$ -caprolactone (CL) was polymerized at 160 °C through ring-opening polymerization (ROP) methodology for two hours with stannous octoate (SO) as a catalyst and silk fibroin as a macro chemical initiator. The second phase involved treating the oxydianiline (ODA) modified by cyanuric chloride (CC) with the Silk-g-PCL system at 85 °C for 6 h while in an environment of air. To serve as a baseline, the silk fibroin was immediately treated with the ODA-CC system in an environment of air at 85 °C for 6 h. FT-IR spectroscopy, DSC, TGA, SEM, EDX, FE-SEM, and proton-NMR spectroscopy were used to characterize the end products. Additionally, its adsorption characteristics towards Cr<sup>6+</sup> and the dye Rhodamine 6G (R6G) were examined. The parameters of thermodynamics were established. The PCL grafted silk fibroin matrix was validated by a peak at 1725 cm<sup>-1</sup> in the FT-IR spectrum. In the <sup>1</sup>H-NMR spectra, a signal at 8.5 ppm indicated that silk fibroin had undergone a structural change.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                         |                |                                                                                                                                       |
|-------------|---------------------------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | Enhancing intrusion detection in IoT using Deep Q-Network, GAN, and GRU networks with preprocessed data |                | <br>Dr.CHAKRAVARTHY V J<br>(COMPUTER APPLICATIONS) |
| AUTHORS     | Chakravarthy V J, K Anuradha, Mercy Buelah, P Abirami, Nirmala Sugirtha Rajini Selvaraj, M Seenivasan   |                |                                                                                                                                       |
| JOURNALNAME | AIP CONFERENCE PROCEEDINGS                                                                              |                |                                                                                                                                       |
| SNIP-0.204  | IMPACTFACTOR-NIL                                                                                        | INDEXED-SCOPUS |                                                                                                                                       |

### ABSTRACT:

The dynamic and varied nature of IoT networks may prove difficult for rule-based or signature-based detection techniques, which are the pillars of traditional IDS approaches. To improve the precision and effectiveness of intrusion detection in IoT (Internet of Things) environments, there is a growing interest in utilizing advanced ML (Machine Learning) and DL (Deep Learning). Using a variety of DL models, including Deep Q-Network (DQN), Generative Adversarial Networks (GAN), and Gated Recurrent Unit (GRU) networks, present a novel method in this paper for improving intrusion detection in IoT contexts. Findings show that better accuracy in detecting intrusions in the BoTNetIoT-L01 dataset may be achieved by combining DQN with z-score normalization and ICA feature extraction. The model's capacity to discriminate between legitimate and malicious IoT network traffic is improved by the combination of feature extraction, data preprocessing, and reinforcement learning. This strengthens the overall security of IoT environments.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                                                       |                |                               |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------|
| PAPERTITLE  | Phytochemical Screening, HPTLC, GC-MS, And In Vitro Antioxidant Analyses of Ethanol Extract of Strychnos Potatorium Seeds             |                | Dr. JONES EBEN RAJ T<br>(AHS) |
| AUTHORS     | Abarajitha Shankaranarayanan, Manickam Subramanian, Ravisankar Periyasamy, Senthil Kumar Anbumani, Jones Eben Raj T, Nithya Venugopal |                |                               |
| JOURNALNAME | JOURNAL OF NATURAL REMEDIES                                                                                                           |                |                               |
| SNIP-NIL    | IMPACTFACTOR-NIL                                                                                                                      | INDEXED-SCOPUS |                               |

### ABSTRACT:

Oxidative stress is a key factor in the development of chronic diseases, and plant products with well-established antioxidant properties have been investigated to counteract this phenomenon. *Strychnos potatorium* seeds are used to treat various ailments, including jaundice and diabetes. Moreover, they are used for water purification because of their coagulant properties. Aim: To explore the phytochemical constituents of the ethanol seed extract of *S. potatorium* and evaluate its *in vitro* antioxidant activity and *in silico* physicochemical characterisation. This research examined the phytochemical profile, antioxidant properties, HPTLC, and *in silico* characterisation of bioactive compounds identified by GC-MS analysis of the ethanol seed extract of *Strychnos potatorium* (EESP). Phytochemical analyses identified the presence of triterpenoids, flavonoids, alkaloids, tannins, glycosides, and saponins. *In vitro* antioxidant assays demonstrated that EESP exhibited concentration-dependent free radical scavenging activity with IC<sub>50</sub> values of 70.04 µg/ mL (DPPH), 83.05 µg/mL (ABTS), 116.27 µg/mL (FRAP), and 87.47 µg/mL (hydrogen peroxide), compared to ascorbic acid. SwissADME *in silico* analysis showed that 16 of the 17 compounds identified in the GC-MS analysis complied with Lipinski's rule, suggesting drug-like properties and favourable bioavailability. Conclusion: These findings suggest that EESP may effectively mitigate diseases associated with oxidative stress and represent a potential candidate for the development of novel therapeutic agents. Further clinical trials are needed to assess the efficacy of EESP-derived compounds in human subjects, which are crucial for translating these findings into therapeutic applications.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                                    |                |                                                                                     |
|-------------|--------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------|
| PAPERTITLE  | Transforming Communication Protocols: Secure Data with IoT-Enabled Devices Controlled by Brain-Computer Interfaces |                |  |
| AUTHORS     | Anusha P, Ramaraj S, N M G Kumar, Sreeja B P, Ravi Kumar Saidala, <b>Selvameena R</b> , Digvijay Pandey            |                |                                                                                     |
| JOURNALNAME | ADVANCES IN COMPUTATIONAL INTELLIGENCE AND ROBOTICS, BRAIN-COMPUTER INTERFACES AND APPLICATIONS IN BUSINESS        |                |                                                                                     |
| SNIP-NIL    | IMPACTFACTOR-NIL                                                                                                   | INDEXED-SCOPUS |                                                                                     |
|             |                                                                                                                    |                | Ms.SELVAMEENA R<br>(CSE)                                                            |

### ABSTRACT:

The discourse concerning communication protocols is being transformed by the convergence of the Internet of Things (IoT) and Brain-Computer Interfaces (BCIs). This relationship has the potential to significantly enhance control, efficiency, and customisation in a variety of applications, including healthcare and smart homes. Brain-computer interfaces (BCIs) facilitate direct communication between humans and technology by converting brain signals into commands. In the interim, Internet of Things (IoT) devices, which are equipped with sensors and actuators, have the capacity to collect and transmit data in an instant. By investigating the synergies between brain-computer interfaces (BCIs) and the Internet of Things (IoT), this study investigates the potential for transforming communication protocols. Future research and development initiatives, data protection, precise signal processing, and user flexibility comprise the primary subjects of the conversation.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

|             |                                                                                                                      |                |                                                                                                                    |
|-------------|----------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | Evaluation of Loading Stresses on Multiunit Abutments in Short Implants – An In vitro Study                          |                | <br><br>Ms.RATHIKA J<br>(TMDCH) |
| AUTHORS     | Rathika J, Sharmila Hussain, Ponsekar Abraham Anandapandian, Jayshri Nandanwar, M Aarti Rajambigai, Abhishek Dwivedi |                |                                                                                                                    |
| JOURNALNAME | JOURNAL OF PHARMACY AND BIOALLIED SCIENCES                                                                           |                |                                                                                                                    |
| SNIP-1.042  | IMPACTFACTOR-NIL                                                                                                     | INDEXED-SCOPUS |                                                                                                                    |

### ABSTRACT:

This study aims to measure the displacement of straight abutment and multiunit abutment with straight abutment after static loading of 200 N at 30-, 40-, and 45-degree angulations. 30 implants were divided into two groups according to the abutment used: Group I – Implant with straight abutments; Group II – Implant with multiunit with straight abutments. Fracture load was determined using a compression load on the abutments with a universal testing machine. The data were analyzed with one-way analysis of variance (ANOVA) and Tukey's *Post Hoc* test. A significant difference was noted between the groups ( $P \leq 0.05$ ). Short implants adequately took up static loading and may be advocated. Minimum displacement occurred in Groups I and II at static loading of 200 N in 30- and 40-degree angulation, which was statistically significant. Maximum displacement occurred in Groups I and II at static loading of 200 N in 45-degree angulation. Multiunits may improve the crown height space and reduce stress concentration at implant abutment junction. Within the limits of the study, it may be concluded that short implants may be advocated with straight abutment and/or multiunit with straight abutment.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION-JUNE 2025

|             |                                                                                                                                                          |                |                                                                                     |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------|
| PAPERTITLE  | Blockchain technology in financial services: Assessing potential opportunities, identifying risks, and understanding its impact on the future of finance |                |  |
| AUTHORS     | Haewon Byeon, G Pandi Selvi, R Robert, Agalya Selvakumar                                                                                                 |                |                                                                                     |
| JOURNALNAME | AIP CONFERENCE PROCEEDINGS                                                                                                                               |                |                                                                                     |
| SNIP-0.204  | IMPACTFACTOR-NIL                                                                                                                                         | INDEXED-SCOPUS |                                                                                     |
|             |                                                                                                                                                          |                | Ms.AGALYA SELVAKUMAR<br>(IT)                                                        |

### ABSTRACT:

Blockchain technology has swiftly progressed from its origin as the underpinning of Bitcoin to a revolutionary instrument in the financial services industry. It provides a decentralized, transparent, and secure platform that facilitates other uses outside bitcoin. The fundamental mechanism of blockchain is its distributed ledger technology (DLT), enabling transaction recording over a decentralized network without middlemen. This crucial attribute offers several prospects in financial services, including decentralized financing (DeFi), cross-border transactions, smart contracts, and asset tokenization. Decentralized Finance (DeFi) is significant for its capacity to democratize financial access by eliminating the need for conventional middlemen such as banks. DeFi systems enable users to lend, borrow, and exchange assets directly, therefore reducing costs and enhancing efficiency. Blockchain has potential in optimizing cross-border payments by removing middlemen, which often elevate costs and delay processes. Moreover, smart contracts facilitate automated procedures, minimizing human error and improving efficiency in financial transactions such as insurance claims and asset transfers. Asset tokenization facilitates the trading of physical and digital assets, including real estate and commodities, by enabling fractional ownership, hence enhancing liquidity and ease of transaction. Nevertheless, despite the substantial potential blockchain offers, there are serious difficulties that need resolution. Regulatory ambiguity continues to be a significant obstacle, since blockchain does not conform to established banking rules. Scalability is a significant concern, since existing blockchain networks have challenges in managing big transaction volumes effectively in terms of speed and cost. The danger of cybersecurity breaches and fraud is exacerbated, particularly in decentralized financial applications, where weaknesses in smart contracts may be exploited.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION – JUNE 2025

|             |                                                                                                |                    |                                                                                                                     |
|-------------|------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | Microstructural Analysis and Mechanical Properties of Sisal Fibre in High-performance Concrete |                    | <br>Dr. T. FELIX KALA<br>(CIVIL) |
| AUTHORS     | K B Shoba, Pachaivannan Partheeban, C Chella Gifta, Felix Kala Thomasmathiyas                  |                    |                                                                                                                     |
| JOURNALNAME | MATERIAL IN TECHNOLOGIZE                                                                       |                    |                                                                                                                     |
| SNIP-0.538  | IMPACTFACTOR-NIL                                                                               | INDEXED-SCOPUS/WOS |                                                                                                                     |

### ABSTRACT

Natural fibre-reinforced concrete has gained attention in recent years as a sustainable solution in the construction industry. This study examines sisal fibre-reinforced concrete's mechanical and microstructural properties, developed with a high-strength concrete matrix. To enhance the characteristic strength of the concrete, sisal fibre was incorporated as a reinforcing element in the matrix to produce high-performance natural fibre-reinforced concrete. Sisal fibre was added in various proportions, i.e., 0.5 %, 1 %, 1.5 %, and 2 % by volume fraction, and fibre-reinforced concrete samples were cast and tested to explore the mechanical properties, including compressive strength, tensile strength and flexural strength. Microstructural analyses, such as Scanning Electron Microscopy (SEM) and X-ray Diffraction (XRD), were conducted to study the surface structure of the concrete. According to the findings, 1 % sisal fibre provides the highest compressive strength in concrete production. Similar to other types of fibres, adding sisal fibres enhanced the strength of the concrete up to an optimal level. Split tensile and flexural strength results indicate the effective reinforcement sisal fibres provide. Microstructural studies revealed an enhanced fibre-matrix bond, reduced porosity, and improved fibre-bridging effects. The results of this study support the potential of using sisal fibre to produce stronger concrete with reduced environmental impact. Sisal fibre-reinforced concrete can be used in suitable engineering applications, promoting sustainability in the construction industry.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                                          |                 |                                                                                                                  |
|-------------|--------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | Molecular Structure, Optical Properties and Docking Studies of 2-Amino-5-Chloropyridine through Quantum Chemical Studies |                 | <br>Dr E KAVITHA<br>(PHYSICS) |
| AUTHORS     | Abirami V, Rithvika Vetrivel, Kavitha Esakimuthu, Antony Selvam L, Arunpandiyam S, Victor Antony Raj M, Selvankumar T    |                 |                                                                                                                  |
| JOURNALNAME | INTERNATIONAL JOURNAL OF ADVANCED SCIENCE AND ENGINEERING                                                                |                 |                                                                                                                  |
| SNIP-0.216  | IMPACT FACTOR-NIL                                                                                                        | INDEXED- SCOPUS |                                                                                                                  |

### ABSTRACT

**ABSTRACT:** In this research, we conducted quantum chemical computations (DFT) on 2-Amino-5Chloropyridine (2A5CP) using Gaussian 16W software with the B3LYP method and the 6311++g(2d,2p) basis set. The optimized molecular geometry, including bond lengths and bond angles, were determined, revealing a low-symmetry point group ( $C_1$  symmetry). Quantum chemical parameters such as molecular electrostatic potential (MESP), Mulliken charges, Natural Bond Orbital (NBO) analysis, HOMO-LUMO gap, chemical hardness ( $\chi$ ), and electronegativity ( $\eta$ ) were evaluated. Additionally, 2A5CP, which consists of 13 atoms in a non-linear structure (3N-6), exhibited 33 vibrational modes. The vibrational frequencies for all fundamental modes were calculated and analyzed based on FT-IR spectra, with all observed modes being both IR and Raman active. The calculated HOMO-LUMO gap of 4.921 eV is relatively small, making the material highly reactive and conductive, thus enabling efficient electron transfer. Docking studies of the title compound reveals that deepest energy value for binding adaptation is  $-3.80$  kcal/mol. The after effects of the dockages demonstrate that the title compound may show inhibitory action against the protein of 7et7.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

|                    |                                                                                                |                 |
|--------------------|------------------------------------------------------------------------------------------------|-----------------|
| RESEARCH COUNCIL   |                                                                                                |                 |
| PAPERTITLE         | Design and Implementation of Accident Detection and Ant Optimization in VANETs in Smart Cities |                 |
| AUTHORS            | L Lakshmi Tejaswi, Balaji C, Ata Kishore Kumar, S Selvalakshmi, G B Santhi, D Arulanantham     |                 |
| JOURNALNAME        | 2025 INTERNATIONAL CONFERENCE ON FRONTIER TECHNOLOGIES AND SOLUTIONS (ICFTS)                   |                 |
| SNIP-0.168         | IMPACTFACTOR-NIL                                                                               | INDEXED: SCOPUS |
| Mr. BALAJI C (CSE) |                                                                                                |                 |

### ABSTRACT:

A comprehensive framework for accident detection and ant optimization in Vehicular Ad-hoc Networks (VANETs) within smart cities. It emphasizes the need for efficient communication networks for accident response and traffic improvements. The proposed model integrates various components, including onboard units, traffic cameras, and dashboard systems, to swiftly detect accidents and coordinate emergency responses. Additionally, the use of ant optimization algorithms enhances route optimization and reliability in VANETs, leveraging bio-inspired principles for efficient data transmission. The abstract highlights the relevance of VANETs in improving road safety, traffic management, and emergency response mechanisms, offering a promising solution for smart city infrastructure.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                                                                                                  |                |                                                                                     |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------|
| PAPERTITLE  | AI-Driven Smart Safety Framework for Community Protection                                                                                                                        |                |  |
| AUTHORS     | Thanush Kannan, R Santhosh, A Pious Niranjana, N Dhanush Raj, Ramesh L, Geetha Soman, Kavitha Thangavel, Anton Xavier Bronson, Maheswari, V Priyadarshini, Amudhan Panneerselvam |                |                                                                                     |
| JOURNALNAME | 2025 INTERNATIONAL CONFERENCE ON DATA SCIENCE AND BUSINESS SYSTEMS (ICDSBS)                                                                                                      |                |                                                                                     |
| SNIP-NIL    | IMPACTFACTOR- NIL                                                                                                                                                                | INDEXED-SCOPUS |                                                                                     |
|             |                                                                                                                                                                                  |                | Mr. THANUSH KANNAN (CSE)                                                            |

### ABSTRACT

Safety in the community is still a major issue in smart city planning, with growing issues of theft, fire risks, gas leaks, and delayed emergency responses. A survey of residential communities in Chennai found that 65.2% of the respondents had theft incidents, mostly in community areas (83.5%), and 55.6% had gas leaks, with 72.8% showing high concern for safety threats. To counteract the limitations, we developed an AI-Based Home and Community Safety System based on IoT-based sensors, real-time communication protocols, and mobile-based monitoring interface. The system consists of flame and gas sensors, OLED display, theft, medical, and false alarm push buttons, and buzzers and LED indicators for notification. A wireless communication framework based on MQTT protocol supports real-time emergency notification among the households to provide immediate response and risk reduction. There is also an IoT dashboard on mobile provided for real-time remote monitoring and controlling of the system, which facilitates ease of access and user interaction. The survey also reflected high community interest in AI-based safety systems with 67.4% considering them to be highly effective and 79.7% willing to trial the system. Prototype testing proved low-latency notifications, efficient hazard detection, and enhanced emergency response systems. The suggested system is in compliance with Sustainable Development Goals (SDG 11 & SDG 9) by increasing the resilience of cities and encouraging smart safety infrastructure.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                       |              |                                     |
|-------------|-------------------------------------------------------------------------------------------------------|--------------|-------------------------------------|
| PAPERTITLE  | Estimation of Gestational Age by Using Fetal Kidney Length in Comparison with Other Biometric Indices |              | Dr SARVESH<br>RAJENDRAN<br>(ACSMCH) |
| AUTHORS     | Sushmitha Alias Tulasi, Sarvesh Rajendran, T Shriram                                                  |              |                                     |
| JOURNALNAME | JOURNAL OF PHARMACY AND BIOALLIED SCIENCES                                                            |              |                                     |
| SNIP- NIL   | IMPACTFACTOR- NIL                                                                                     | INDEXED- WOS |                                     |

### ABSTRACT

Fetal kidney length (FKL) has emerged as a promising alternative, with a strong correlation to gestational age, particularly in the third trimester. To determine the accuracy of FKL in estimating fetal gestational age by ultrasonography and comparing its efficacy with other biometric indices. A comparative observational study was conducted at Aarupadai Veedu Medical College and Hospital, Puducherry, involving 110 antenatal women with singleton pregnancies between 20 and 40 weeks of gestation. Ultrasound examinations were performed using a Mindray DC 80 machine with a 3.5-5 MHz curvilinear probe. Gestational age was estimated using FKL and compared with standard biometric indices. Pearson correlation analysis and independent *t*-tests were performed using SPSS version 26.0, with significance set at  $P < 0.05$ . A significant positive correlation was observed between FKL and gestational age ( $r = 0.975$ ,  $P < 0.001$ ). The mean FKL showed a consistent linear increase with advancing gestational age, comparable to traditional biometric indices such as head circumference and abdominal circumference. Right and left kidney lengths exhibited similar correlations, reinforcing the reliability of FKL in estimating gestational age. FKL is a reliable parameter for gestational age estimation, particularly in the third trimester. Its strong correlation with standard biometric indices supports its use as an adjunct in prenatal ultrasound assessments, especially in cases where conventional measurements are inconclusive.

## Dr M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                                                              |              |                                     |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------|
| PAPERTITLE  | Ultrasonographic Measurement of the Fetal Foot Length and the Ratio of the Fetal Femur to Foot Length to Determine the Fetal Gestational Age |              | Dr SARVESH<br>RAJENDRAN<br>(ACSMCH) |
| AUTHORS     | L Suganya, Sarvesh Rajendran, T Shriram                                                                                                      |              |                                     |
| JOURNALNAME | JOURNAL OF PHARMACY AND BIOALLIED SCIENCES                                                                                                   |              |                                     |
| SNIP- NIL   | IMPACTFACTOR- NIL                                                                                                                            | INDEXED- WOS |                                     |

### ABSTRACT

Accurate estimation of fetal gestational age (GA) is critical for optimal prenatal care. Fetal foot length (FFL) has emerged as a promising alternative due to its relatively stable growth pattern throughout gestation. Additionally, the femur-to-foot length (FL/FFL) ratio has been proposed as a method to enhance GA estimation accuracy. This study aimed to assess relationship between sonographic GA and FFL. A prospective observational study was conducted in the Department of Radiology at Aarupadai Veedu Medical College and Hospital, Puducherry. A total of 90 antenatal women with singleton pregnancies between 16 and 34 weeks of gestation were included. FFL and femur length were measured using a Mindray DC 80 ultrasound scanner. Pearson correlation analysis and independent *t*-tests were performed using SPSS version 26.0, (IBM Corp., Armonk, NY) with significance set at  $P < .05$ . GA corresponded with ultrasound findings in 93.3% of participants. A strong positive correlation was observed between GA and FFL ( $r = 0.899$ ,  $P < .001$ ). Additionally, FFL correlated significantly with BPD ( $r = 0.915$ ), HC ( $r = 0.918$ ), AC ( $r = 0.914$ ), and FL ( $r = 0.955$ ) ( $P < .001$  for all). The FL/FFL ratio remained stable mean value of 1.0132, reinforcing its reliability as a supplementary marker. Fetal foot length is a reliable marker for GA estimation and exhibits strong correlations with other biometric indices. The stable FL/FFL ratio further supports its use as a supplementary parameter in assessing fetal growth.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|                  |                                                                                                                 |                        |                                                                                                                                 |
|------------------|-----------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE       | IoT-Based Smart Home Energy Management System (SHEMS) Using Networking and Automation                           |                        | <br><b>Dr.JEGADEESHWARI PERIYASAMY (ECE)</b> |
| AUTHORS          | Arokia Martin N, Kirubakaran N, Senthil Kumar G, Selvaganesan C, <b>Jegadeeshwari Periyasamy</b> , Vijayaraja V |                        |                                                                                                                                 |
| JOURNALNAME      | 2025 INTERNATIONAL CONFERENCE ON DATA SCIENCE AND BUSINESS SYSTEMS (ICDSBS)                                     |                        |                                                                                                                                 |
| SNIP- <b>NIL</b> | IMPACTFACTOR- <b>NIL</b>                                                                                        | INDEXED- <b>SCOPUS</b> |                                                                                                                                 |

### ABSTRACT:

Physical energy meter reading concept is outdated and it is not efficient, leading to lots of wastage of manpower and errors, obtaining accurate real-time readings is challenging and complex to achieve consistently. Current implementations of IoT technology allow real-time monitoring and energy management capabilities with the integration of IoT ecosystems, Digital Communication Technology networks, and Machine Learning algorithms to further analyze data as well as enhance user convenience. However, despite their promising potential, these systems face ongoing challenges, including adaptability, scalability, interoperability and enhanced cyber security resilience, particularly in large-scale deployments. This review examines present SHEMS and their capabilities, from strengths such as real-time tracking of energy usage, optimization and consumption of energy at offpeak hours by the application of predictive analytics using Machine Learning. This also elucidates areas for improvement, such as an improved integration of renewable energy technologies, simplification of the complexities surrounding large-scale deployment and sustainability over the long term. Addressing these deficits, this paper further promotes advancements in the design of SHEMS that are more secure, scalable and inter-operable, increasing communication across IoT ecosystems and by using smart grid technology, which could improve effective management of energy and a potential wider uptake. These suggestions are aimed at fine-tuning existing technologies to be easily integrated into modern, automated energy systems for better energy management.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                  |                 |                        |
|-------------|--------------------------------------------------------------------------------------------------|-----------------|------------------------|
| PAPERTITLE  | Decentralized Air Quality Management using Edge AI and Real-Time Control                         |                 | Mr. SUNDAR S<br>(MECH) |
| AUTHORS     | Balamanikandan A, Shaik Rahamtula, Sundar S, Suresh Velayudham, Chinnarasu K, Chillara Jagadeesh |                 |                        |
| JOURNALNAME | 2025 Third International Conference on Augmented Intelligence and Sustainable Systems (ICAISS)   |                 |                        |
| SNIP- NIL   | IMPACTFACTOR- NIL                                                                                | INDEXED- SCOPUS |                        |

### ABSTRACT:

This research introduces a groundbreaking approach to real-time air quality monitoring and control by implementing Edge AI on an Arduino microcontroller. The system is designed to integrate an array of sensors that capture real-time air quality data, which is subsequently processed by optimized machine learning models deployed directly on the edge device. This innovative approach removes the need for cloud connectivity, significantly reducing latency, and enabling a swift response to fluctuating air quality conditions. The use of lightweight neural networks, such as Mobile Net or Efficient Net, ensures the system is highly efficient and suitable for resource-constrained devices. Real-time control algorithms, driven by AI assessments, dynamically adjust air purifiers, ventilation systems, and other mitigation measures to maintain optimal indoor air quality. This Edge AI-powered solution offers a cost-effective and energy-efficient method for enhancing air quality in real-time, with potential applications ranging from smart homes to larger public spaces. By leveraging these advanced technologies, the system not only improves accuracy and efficiency but also empowers users to take proactive measures for their health and well-being, thereby contributing to a healthier and more sustainable environment.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                                                                                                    |                 |                                                                                                                                     |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | Cytoprotective and anti-inflammatory effects of Manilkara Zapota ethanolic flower extract against H <sub>2</sub> O <sub>2</sub> -induced oxidative stress in raw 264.7 macrophages |                 | <br>Mr. GNANAMOORTHY KUMARAN<br>(BIO-TECHNOLOGY) |
| AUTHORS     | Gnanamoorthy Kumaran, Gomathi Kannayiram, Sindhu Govindaraj, Kowsalya Rajendran, Udhaya Kumar Ramadass                                                                             |                 |                                                                                                                                     |
| JOURNALNAME | INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCES                                                                                                                                    |                 |                                                                                                                                     |
| SNIP- NIL   | IMPACTFACTOR- NIL                                                                                                                                                                  | INDEXED- SCOPUS |                                                                                                                                     |

### ABSTRACT:

Oxidative stress plays a crucial role in the initiation of inflammation and cellular damage. Hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) is commonly used to induce oxidative stress in vitro. The present study evaluates the cytoprotective, antioxidant, and anti-inflammatory properties of the ethanolic extract of Manilkara zapota flowers (SFE) on H<sub>2</sub>O<sub>2</sub>-induced RAW 264.7 macrophage cells. Sapota flowers were collected, shade-dried, and ground into powder. Ethanolic extracts were prepared and tested for cytoprotective and anti-inflammatory activities using MTT assay, nitric oxide (NO) and prostaglandin E<sub>2</sub> (PGE<sub>2</sub>) quantification, DCFDA staining for reactive oxygen species (ROS) assessment, and gene expression analysis via real-time PCR. Morphological changes were observed using phase contrast microscopy. SFE was non-toxic up to 200 µg/ml and significantly improved cell viability in H<sub>2</sub>O<sub>2</sub>-treated cells. SFE effectively reduced NO, PGE<sub>2</sub>, and ROS levels in a dose-dependent manner. Morphological analysis confirmed the protective effect of SFE against oxidative damage. Gene expression studies showed that SFE downregulated pro-inflammatory cytokines (TNF- $\alpha$ , IL-1 $\beta$ , IL-6, IL-8, Cox-2a) and moderated IL-10 levels, indicating its anti-inflammatory potential. The ethanolic extract of Manilkara zapota flowers exhibits strong cytoprotective, antioxidant, and anti-inflammatory activities, suggesting its potential as a therapeutic agent against oxidative stress-related inflammatory conditions.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                 |                |                                                                                                                                           |
|-------------|-------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | Echoes of a King: Unveiling the Davidic Psalter |                | <br>Ms.REBECCA<br>CHARLOTTE<br>SREEDHARAN<br>(ENGLISH) |
| AUTHORS     | Rebecca Charlotte Sreedharan.                   |                |                                                                                                                                           |
| JOURNALNAME | INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCES |                |                                                                                                                                           |
| SNIP- NIL   | IMPACTFACTOR- NIL                               | INDEXED-SCOPUS |                                                                                                                                           |

### ABSTRACT:

"King David's Psalms hold a central place in biblical poetry and worship, revealing a wide range of emotional and theological expression." Scholars emphasize not only their historical context but also their ongoing spiritual significance. For example, Peter C. Craigie highlights the Psalms' role in shaping Israel's worship practices and theological identity, pointing to their function as communal and individual prayers (Craigie 102). John Goldingay further explores the rich literary structures within the Psalms, noting how their poetic forms convey complex layers of meaning (Goldingay 55). James L. Mays underscores the Psalms' capacity to engage the faithful in deep reflection, interpreting them as texts that invite personal and corporate dialogue with God (Mays 33). Tremper Longman III's work stresses the relevance of the Psalms for contemporary believers, showing how they address universal themes like suffering, praise, and hope in a relatable way (Longman 67). Additionally, Walter Brueggemann draws attention to the Psalms as living texts that shape faith communities' ongoing spiritual life, with their dynamic expressions of lament and thanksgiving offering a model for an honest relationship with the divine (Brueggemann, Psalms and the Life of Faith 88). Together, these perspectives help frame King David's psalms not only as historical documents but also as vibrant, multi-dimensional prayers that continue to inspire and challenge readers across time.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|             |                                                                                                                                                           |                 |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| PAPERTITLE  | Predictive Healthcare Machine Learning Models that are Easy to Understand: Finding the Right Balance Between Precision and Openness in Clinical Prognoses |                 |
| AUTHORS     | S Rajesh Kumar, Elakkiya Sivalingam, Sumalatha A, B R Celia, Radhika M, D Karunkuzhali                                                                    |                 |
| JOURNALNAME | 2025 3RD INTERNATIONAL CONFERENCE ON SMART SYSTEMS FOR APPLICATIONS IN ELECTRICAL SCIENCES (ICSSSES)                                                      |                 |
| SNIP- NIL   | IMPACTFACTOR- NIL                                                                                                                                         | INDEXED- SCOPUS |



Dr. ELAKKIYA  
SIVALINGAM  
(ECE)

### ABSTRACT:

Predicting patient outcomes, optimising treatment plans, and enhancing clinical decision-making are three areas where machine learning (ML) models have grown in prominence in healthcare. But even though these models are very accurate predictors, they are frequently “black boxes,” which makes it hard for doctors to comprehend and rely on their results. For predictive healthcare models to be useful, doctors must be able to understand how the models work and why they are accurate. Only then can they improve patient care. This research seeks to delve into the intricate relationship between healthcare machine learning models' precision and interpretability, with an emphasis on creating methods that are both exceptionally precise and easily comprehensible for doctors. We look at various ML methods-like logistic regression, decision trees, and random forests-that make patient outcome predictions in a more understandable way, and we compare them to complicated models like deep learning, which focus on accuracy but aren't always transparent. To provide light on the decision-making processes of models without sacrificing predictive power, we investigate the potential applications of models such as explainable AI (XAI) and feature significance approaches to clinical datasets. The “sweet spot” where an improved model's predictability remains unaffected by efforts to make it more explainable is an important part of this work.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION –JUNE 2025

|              |                                                                                                                |                 |                                                                                                                                               |
|--------------|----------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE   | Advanced lung tumor segmentation using deep learning-based method with the TDyWT algorithm                     |                 | <br><br>Ms.SOUNDHARYA<br>DEVI<br>(COMPUTER<br>APPLICATION) |
| AUTHORS      | Soundharya Devi, Nirmala Sugirtha Rajini Selvaraj, Preetha Ganesan, Abirami P, Chakravarthy V J, Seenivasan M. |                 |                                                                                                                                               |
| JOURNAL NAME | AIP CONFERENCE PROCEEDINGS                                                                                     |                 |                                                                                                                                               |
| SNIP- 0.204  | IMPACTFACTOR- NIL                                                                                              | INDEXED- SCOPUS |                                                                                                                                               |

### ABSTRACT:

Lung infections can be accurately classified from histopathological pictures, which is essential for oncology research, diagnosis, and therapy planning. In this work, region-based, edge-based, and deep-based UNet segmentation algorithms are used to improve lung tumor segmentation from histopathology pictures. According to our investigation, deep-based UNet segmentation regularly performs better than other techniques, showing improvements in F1 score, Sensitivity, and Intersection over Union (IoU). Furthermore, the Transverse Dyadic Wavelet Transform (TDyWT) is used to tackle the problem of the noise reduction process. The outcomes of the experiment shows the effectiveness of TDyWT and deep learning techniques in enhancing the precision and robustness of lung tumor segmentation from histopathology pictures. The Lung Cancer Histopathological Images dataset, available on Kaggle, was used for the studies. Python was used to construct segmentation techniques and noise reduction algorithms. The results of this study may improve patient outcomes, therapy planning, and diagnostic precision in the management of lung cancer.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

|             |                                                                                                               |                 |                                                                                                                              |
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| PAPERTITLE  | Correlating Job Crafting and Dimensions of Employee Engagement: Idealization Impact of Demographic Attributes |                 | <br><br>Ms.THENMOZHI PANCHATCHARAM (FOCA) |
| AUTHORS     | Thenmozhi Panchatcharam, Radhikaa Shree M                                                                     |                 |                                                                                                                              |
| JOURNALNAME | INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCES (IND)                                                         |                 |                                                                                                                              |
| SNIP-1.733  | IMPACT FACTOR-NIL                                                                                             | INDEXED: SCOPUS |                                                                                                                              |

### ABSTRACT:

The study examined the correlation between job crafting (relationship, task and cognitive crafting) and employee engagement (Vigour, dedication and absorption) with impact of age and work experience among the employees of print media industry located at Chennai, India. Data was collected from 140 employees. Convenience sampling method was used. The data was analyzed using SPSS software. The result of multiple regression indicated that employees are highly engaged when job crafting is followed in an organization. Employees with more aged remained absorbed and dedicated in their work and more experienced employees engaged in relationship crafting and had higher level of engagement. The study also provided some suggestions for Companies in following job crafting

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

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| PAPERTITLE  | Consensus Guidelines of the Indian Academy of Pediatrics (IAP)—Neurodevelopmental Pediatrics Chapter on Developmentally Supportive Follow-Up for High-Risk Infants |                    |  |
| AUTHORS     | Zafar Mahmood Meenai, Samir Dalwai, Lal D V Nair, Sharmila B Mukherjee, Naveen Jain, Deepak Dwivedi, Adarsh Eregowda, Indu Surana, Abraham K Paul, Khurshid Wani   |                    |                                                                                     |
| JOURNALNAME | INDIAN PEDIATRICS                                                                                                                                                  |                    |                                                                                     |
| SNIP-NIL    | IMPACTFACTOR-NIL                                                                                                                                                   | INDEXED-SCOPUS/WOS |                                                                                     |
|             |                                                                                                                                                                    |                    | Dr ADARSH EREGOWDA (RRMCH)                                                          |

### ABSTRACT:

With increasing neonatal survival, there is a need for trained staff for timely identification and intervention for high-risk infants. Since the foundation of neurodevelopment is laid in the first three years of life, addressing the lacunae of a robust guidelines for extended follow-up of high-risk infants needs to be formulated to avoid remediation or rehabilitation later on. To develop comprehensive evidence-based consensus guidelines for developmentally supportive care and follow-up of high-risk infants in the Indian context with the aim of reducing the need for future rehabilitative service Scientific literature over the last 10 years was searched using database-specific controlled vocabularies like Emtree for Embase, MeSH terms for PubMed, Scopus, CINAHL headings for CINAHL databases, and the Cochrane Library. The available studies were analyzed based on their scientific credibility and strength of evidence. Data from meta-analysis, systematic reviews, and randomized controlled trials was extracted, and relevant statements were prepared. These were deliberated in two onsite Delphi rounds of discussion (February 19, 2023 and January 11, 2025) and one hybrid (online and onsite) Delphi round (February 6, 2025). The final draft was made under different headings and was circulated, followed by recommendations made with Grading of Recommendations Assessment, Development and Evaluation (GRADE) analysis. The final draft after incorporating all suggestions was circulated and accepted online on March 2, 2025.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

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| PAPERTITLE  | Preventive care models for older adults with multimorbidity: A systematic review for better health outcomes                                                     |                | <br>Dr VEENA KIRTHIKA S<br>(PHYSIOTHERAPY) |
| AUTHORS     | B Sharmila, Biswajit Dash, Veenakirthika S, S Sivakumar, Kanagaraj Rengaramanujam, Danti Joseph, Rajkumar Krishnan Vasanthi, Kumaraswamy Dabburu, Nirmali Gogoi |                |                                                                                                                               |
| JOURNALNAME | INDIAN JOURNAL OF FORENSIC AND COMMUNITY MEDICINE                                                                                                               |                |                                                                                                                               |
| SNIP-NIL    | IMPACTFACTOR-NIL                                                                                                                                                | INDEXED-SCOPUS |                                                                                                                               |

### ABSTRACT:

Quality of life (QoL) in older adults encompasses physical, mental, and social well-being, focusing on maintaining independence and daily functioning. Aged residential care (ARC) is institutionalized care for those unable to live independently due to physical or cognitive decline. Preventive interventions aimed at improving older adults' health outcomes often target reducing hospital admissions, delaying ARC entry, and enhancing functional ability. Effective interventions address multimorbidity, promote autonomy, and integrate health professional education to ensure long-term health improvements, including QoL. Early reviews on preventive interventions have shown mixed results due to variations in intervention designs, follow-up durations, and contextual factors. Many studies overlooked the integration of diverse care models and holistic outcomes like autonomy and QoL. The role of health risk professional education in supporting intervention implementation has been underexplored. This systematic review aims to consolidate evidence, address research gaps, and provide insights into effective strategies for improving health outcomes in older populations. The review methodology includes a comprehensive search strategy, data extraction, and clear inclusion and exclusion criteria. A quality assessment of the studies ensures high-quality research, and risk of bias analysis evaluates study reliability. The key focus areas include age range and comorbidity, health professional education, intervention effects, main outcomes, recommendations, and study limitations. This review addresses earlier gaps by offering a detailed analysis of integrative intervention models, emphasizing health professional education, and focusing on the sustainability of preventive strategies crucial for today's aging population. Given that the studies reviewed were conducted in high-income countries, future research should explore the adaptation of such interventions to resource-constrained settings, particularly in developing countries facing a growing aging population.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

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| PAPERTITLE  | The Ki67-Expressing cells: Hidden gems in the Oral Cavity of adult Mammal |                    | <br><br><b>Dr SHRINITHI M R</b><br>(TMDCH) |
| AUTHORS     | Nor Farid Mohd Noor, U S Mahadeva Rao, Shrinithi M R, Kalandar Ameer      |                    |                                                                                                                               |
| JOURNALNAME | RESEARCH JOURNAL OF PHARMACY AND TECHNOLOGY                               |                    |                                                                                                                               |
| SNIP-NIL    | IMPACTFACTOR-NIL                                                          | INDEXED-SCOPUS/WOS |                                                                                                                               |

### ABSTRACT:

**Introduction:** Neurogenesis in the mammal exists in several neurogenic areas such as subventricular region, sub granular zone of dentate gyrus of the brain and central canal of the spinal cord. The existence of dividing cells in these areas can be demonstrated with immunohistochemistry marker such as Ki67. It is possible that there is an existence of other proliferative areas such in the oral cavity. **Objectives:** To identify the Ki67-expressing cells in the spinal cord, and oral region such as tongue. **Methodology:** Sprague Dawley rats were used, and the tissues from the spinal cord, and tongue were taken and stained using Ki67. The slides were reviewed under light microscope. **Results:** The tissues from the spinal cord (lamina X of the grey matter), and areas around oral cavity such as tongue were stained positive with Ki67 marker. **Conclusion:** The Ki67-expressing cells were identified in the oral cavity such as taste buds, thyroglossal duct and ganglion.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

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|-------------|------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | Exploring ethical and social dimensions of healthcare robotics in patient centered care        |                | <br><b>Dr.SHOBARANI RANGANATHAN</b><br>(AI & DS) |
| AUTHORS     | Shobarani Ranganathan, Dhivya P, Kavitha R, Aarth Priscilla G                                  |                |                                                                                                                                     |
| JOURNALNAME | REHABILITATION ENGINEERING, ASSISTIVE TECHNOLOGIES AND THE FUTURE OF HEALTHCARE USING ROBOTICS |                |                                                                                                                                     |
| SNIP-NIL    | IMPACTFACTOR-NIL                                                                               | INDEXED-SCOPUS |                                                                                                                                     |

### ABSTRACT:

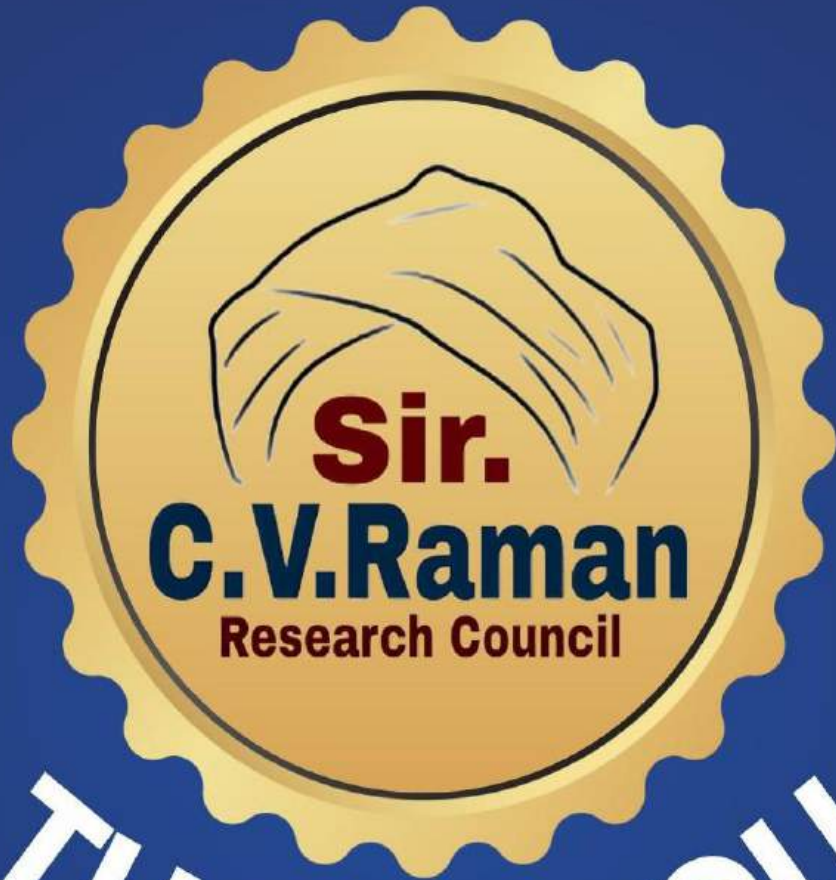
Robotics in healthcare has recently been a game changer in several areas of medicine, including surgery, rehabilitation, and telemedicine, among many more. Robots in healthcare have several social and ethical ramifications, which this chapter delves into. Constantly evolving technological landscape necessitates thorough analysis of emerging issues and factors. Safeguarding patients' right to make their own decisions and dealing with issues of privacy and informed consent are all part of the ethical framework. The examination of robotic systems' dependability, safety, responsibility, and liability becomes an important component in determining care quality. Healthcare providers are not the only ones whose jobs and duties will be affected by the societal ramifications; new concerns about education and training will also arise. Additionally, the interaction between patients and healthcare providers is examined, with a focus on how trust, emotional effect, and psychological factors play a role. There is an examination of the cost–benefit dynamics and possible long-term economic impacts, which sheds light on economic factors. The examination of the regulatory environment pertaining to healthcare robots highlights the need for revised rules that are in step with technology developments. This chapter takes a global view of healthcare robotics regulation, highlighting how geographical differences affect the acceptance and moral use of these technologies. Using case studies, this chapter provides insights and lessons learned from successful integration, ethical challenges, and failures. Looking forward, we investigate potential developments and obstacles in light of recent tech, artificial intelligence, machine learning, and human–robot interaction. This chapter concludes with a thorough examination of the present situation, forthcoming tendencies, and possible remedies with regard to the social and ethical consequences of healthcare robotics. The purpose of these suggestions and rules is to help with the ethical principles and deployment of healthcare robots, so that technological progress does not conflict with fundamental social values.

## Dr. M.G.R. RESEARCH PUBLICATION APPRECIATION–JUNE 2025

|             |                                                                                       |                |                                                                                                                       |
|-------------|---------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------|
| PAPERTITLE  | Radiological Age Estimation from Epiphyseal Fusion of Distal Femur and Proximal Tibia |                | <br>Dr. R K NAVIN KUMAR<br>(SLMCH) |
| AUTHORS     | Sneha S, R K Navin Kumar, Ganesh Rajahan D, Priyadarshee Pradhan, Bhawna              |                |                                                                                                                       |
| JOURNALNAME | Journal of Forensic Medicine Science and Law                                          |                |                                                                                                                       |
| SNIP-0.39   | IMPACTFACTOR-NIL                                                                      | INDEXED-SCOPUS |                                                                                                                       |

### ABSTRACT:

Dedouit et al, Kramer et al and Vieth et al defined different staging methods over different sequences in knee MRI for bone age determination. Our study aims to examine three different methods in which the maturation stages of the knee epiphyses are evaluated by MRI in the same population, to compare the methods and results and evaluate them for some age thresholds and to discuss their applicability in forensic age estimation. In this study, 597 knee images obtained using a 3.0T MR scanner were evaluated retrospectively. The  $T_1$  weighted and proton density-weighted sequences were evaluated by two observers. Knee bone development was staged on the femur and tibia, and descriptive statistics were calculated for each stage according to age and sex. Descriptive statistics were presented according to the age and sex of the cases, and intra- and interobserver agreements were evaluated by the  $\kappa$  and  $\kappa_w$  statistics obtained by the Fleiss approach. Significant changes were found in stages depending on age. The intra- and interobserver agreement levels were very good ( $\kappa > 0.80$ ) for each method. The methods of Dedouit, Kramer and Vieth can be used as an additional criterion for forensic age estimation for 14-, 15-, 18- and 21-year thresholds. Knee MRI stands out as an alternative modality for age estimation and it is necessary to prefer the method intended for the investigated age range with an individual-specific approach.



THANK YOU