



# PUSHPAGIRI RESEARCH CENTRE UPDATES

## MOU SIGNED BETWEEN SANTHIGIRI SCIENTIFIC AND INDUSTRIAL RESEARCH INSTITUTE AND PUSHPAGIRI RESEARCH CENTRE

A Memorandum of Understanding (MoU) was formally signed between the Santhigiri Scientific and Industrial Research Institute (SSIRI) and the Pushpagiri Research Centre (PRC) on 22 January 2026 at the Director's Office, Pushpagiri Institute of Medical Sciences & Research Centre. This MoU follows the exploratory and planning discussions held earlier between the two institutions to identify areas of collaborative research.

The agreement aims to strengthen collaborative research initiatives, facilitate joint submission of research proposals, promote co-authored scientific publications, and support product development and translational research. The partnership seeks to integrate modern scientific approaches with traditional knowledge systems and natural product-based research, leveraging the complementary expertise and infrastructure of both institutions.

On behalf of SSIRI, the MoU was signed by Dr. R. Sindhu, Director (Research) and Chief Scientist, while Dr. Mathew Mazhavancheril, Director (Research), Pushpagiri Research Centre and Director, Pushpagiri Medical College, signed on behalf of PRC. The collaboration will be coordinated by Dr. Soumya R. S. (PRC) and Dr. Janani Ramyaprabha N. Jana Thapasini (SSIRI), who will oversee the implementation of joint activities outlined in the agreement.

This MoU marks a significant milestone in formalizing the collaborative intent discussed in previous meetings and is expected to contribute meaningfully to high-impact research, innovation, and knowledge translation in biomedical and industrial research domains.



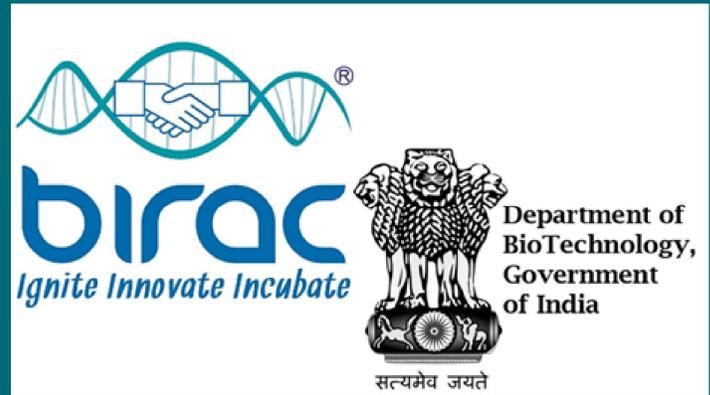
# NEW DBT-BIRAC PROJECT SANCTIONED TO PRC

A major new research project titled “Extraction of Nanocellulose and Carrageenan from Seaweeds and Preparation of Polymer Nanocomposites for Tissue Engineering and Diabetic Wound Healing” has been sanctioned to the Pushpagiri Research Centre (PRC).

The project is funded by the Department of Biotechnology (DBT) – BIRAC, Government of India, with a total outlay of ₹165 lakhs and a project duration from 2026 to 2028. The project

will be led by Dr. Nebu George Thomas, Scientist, PRC, in association with Dr. Sabu Thomas, and in collaboration with CHRIST University, Bengaluru.

The project focuses on developing advanced bio-based polymer nanocomposites for applications in tissue engineering and diabetic wound healing, marking a significant advancement in translational biomaterials research at PRC.



## INVITED LECTURE BY PRC SCIENTIST AT DHR-ICMR NATIONAL WORKSHOP

Dr. Aniket Naha, Scientist, Pushpagiri Research Centre, was invited as a speaker at Maharani's Science College for Women, Mysore, where he delivered a lecture on “Vector-Borne Disease Complications: Targeting AMR and Virulence in Shigella flexneri and ESβL-Producing Escherichia coli”.

The talk was part of the DHR-ICMR sponsored Integrated National Workshop on “Molecular Approaches to Vector-Borne Disease Surveillance and Control: From Resistance to Resilience”, held on 2nd January 2026. His presentation highlighted molecular strategies to address antimicrobial resistance and pathogen virulence, contributing to national efforts in infectious disease surveillance and control.



## PRC SCIENTIST DELIVERS INVITED TALK AT POLYMER 2026

Dr. Nebu George Thomas, Scientist, Pushpagiri Research Centre (PRC), delivered an invited lecture at POLYMER 2026 – International Conference on Recent Advances in Emerging Polymeric Materials: Bridging Science and Industry, held at Mahatma Gandhi University, Kottayam.

His talk, titled “Bench-to-Bedside Bridge: Comprehensive Preclinical Analysis of Scaffolds for Functional Tissue Regeneration,” highlighted translational approaches in polymer-based scaffold development, emphasizing preclinical evaluation strategies that facilitate the transition from laboratory research to clinical application.

The presentation showcased PRC’s contributions to advanced biomaterials research and reinforced its engagement with international platforms that bridge fundamental science and industrial application.



## FIRST IRB MEETING OF 2026 HELD AT PUSHPAGIRI RESEARCH CENTRE

The first Institutional Review Board (IRB) meeting of 2026 was held on 20 January 2026 at Pushpagiri Research Centre. During the meeting, a total of 24 research proposals submitted by faculty members of Pushpagiri Institute of Medical Sciences & Research Centre and the Pushpagiri College of Dental Sciences were reviewed.

In addition to faculty submissions, the Board also reviewed research proposals from postgraduate students of the Dental College, as well as proposals received from external institutions with which Pushpagiri has established formal Memoranda of Understanding (MoUs).

## PRC FACULTY VISIT TO ST. JOHN'S RESEARCH INSTITUTE, BENGALURU

Faculty members from Pushpagiri Research Centre (PRC)—Dr. Reeba Mary Issac, Dr. A. N. Ampadi, and Dr. Rosin George Varghese—visited the St. John's Research Institute (SJRI), Bengaluru, on 8 January 2026 to explore research facilities and potential avenues for collaboration.

During the visit, the PRC team was introduced to key research infrastructure at SJRI, including the Biorepository Unit, which supports long-term storage of diverse clinical samples such as peripheral blood cells, plasma, DNA extracts, and bacterial cultures at temperatures of  $-20^{\circ}\text{C}$ ,  $-80^{\circ}\text{C}$ , and liquid nitrogen (vapour phase). The team also interacted with faculty from the Division of Epidemiology, Biostatistics & Population Health, which is actively engaged in applied epidemiology and population health research, particularly in the area of Maternal and Child Health, as well as the Animal House facility.

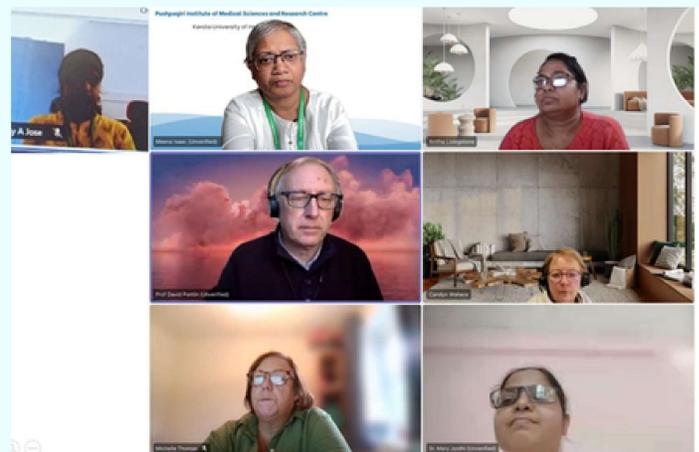


An important highlight of the visit was the interaction with Dr. Tony Raj, Dean, St. John's Research Institute, and a visit to the Grants Office, where discussions focused on research funding mechanisms, institutional processes, and collaborative opportunities. The team also gained insights into the activities of the St. John's Health Innovation Foundation (SJHIF), established in 2018 to promote health innovation, interdisciplinary collaboration, and translation of research into affordable healthcare solutions.

The visit provided valuable exposure to SJRI's integrated research and innovation ecosystem and opened avenues for future collaboration in biomedical research, population health, and health innovation, aligning with PRC's mission to strengthen translational and collaborative research initiatives.

## FRAIT PROJECT: ONLINE REVIEW MEETINGS HELD IN JANUARY 2026

A series of strategic online meetings related to the Family Risk Assessment and Intervention Tool (FRAIT) were held on January 13 and 27, 2026, involving faculty members from Pushpagiri Research Centre and Pushpagiri College of Nursing in collaboration with the University of South Wales (USW). Participants from Pushpagiri included Dr. Betsy A. Jose, Dr. Meena Sagar (Department of Community Medicine), and Sr. Mary Jyothi OSS (Pushpagiri College of Nursing). The meetings focused on the continued development and refinement of the FRAIT tool.



During the sessions, the USW team shared key findings from the data collection phase conducted in June 2025, which served as the empirical basis for the current version of the tool. Discussions centered on a comprehensive framework comprising 122 assessment statements, organized into four thematic clusters: Conducive Family Environment for Learning, Equal Participation of Women in Family, Health, and Household Circumstances. Together, these domains aim to capture a multidimensional understanding of family risk and resilience.

The collaborative discussions emphasized the need for contextual and cultural adaptation of the tool, with inputs from the Pushpagiri team to ensure relevance to the Kerala setting. The meetings concluded with plans for pilot testing the refined tool, marking a significant step toward finalizing a standardized assessment instrument. This ongoing international collaboration reflects Pushpagiri Research Centre's commitment to advancing evidence-based approaches in community and family health research.

## RESEARCH CAPACITY ENHANCEMENT INITIATIVES AT PUSHPAGIRI RESEARCH CENTRE

A series of initiatives aimed at strengthening the research ecosystem at the Pushpagiri Research Centre (PRC) were carried out on Tuesday, 13 January 2026, bringing together strategic collaboration, international academic exchange, and infrastructure enhancement.

The programme commenced at 2:00 PM with the signing of a Memorandum of Understanding (MoU) between Pushpagiri Research Centre and Vellore Institute of Technology (VIT) at the PRC Conference Room. The MoU was formalized to promote academic collaboration and joint research initiatives between the two institutions.

This was followed at 2:10 PM by an interactive faculty session led by Dr. Avneesh Chopra, Distinguished Scientist from Charité – Universitätsmedizin Berlin, Germany, held at the PRC Conference Room. The session facilitated knowledge exchange and discussions on advancing translational and collaborative research.

At 2:30 PM, the programme concluded with an Inaugural Ceremony and Equipment Launch at the Animal House Facility, where Rev. Dr. Mathew Mazhavancheril, Director, PIMS & RC, offered the invocation and blessings. This was followed by the official release of the brochure of the newly installed Blood and Serum Analyser, which was handed over by Dr. Vikram Gowda, Chairman, Institutional Animal Ethics Committee (IAEC), to the Director, PIMS & RC. A technical demonstration of the equipment was conducted by the Veterinary Officer, PRC, highlighting its utility in preclinical research.

Together, these events reflected PRC's continued commitment to enhancing research capacity through strategic partnerships, international engagement, and strengthening of core research facilities.



## ORIENTATION SESSION FOR PRC PROJECT STUDENTS, INTERNS, AND TRAINEES

An orientation session for project students, interns, and research trainees of Pushpagiri Research Centre (PRC) was conducted on 23rd January 2026 by Dr. Aniket Naha, Student Coordinator, PRC. The session was organized to familiarize participants with the institutional framework and to ensure a safe and disciplined research environment.

The orientation covered PRC rules and regulations, essential do's and don'ts, and expectations regarding professional conduct within the research setting. Special emphasis was placed on laboratory and workplace safety, including emergency preparedness related to fire incidents, chemical spills, and injury management.

The session also reinforced the importance of adherence to safety protocols and ethical research practices, helping new entrants integrate smoothly into PRC's research ecosystem while maintaining high standards of safety and professionalism.



## HANDS-ON TRAINING ON CLINICAL MICROSCOPE HANDLING

The Medical Biotechnology and Computational Drug Designing Laboratory, Pushpagiri Research Centre (PRC), conducted a specialized hands-on technical training session for its research students on 24th January 2026. The session focused on the handling and operation of the newly installed Magnus Trinocular Clinical Research Microscope (Model: MX21i-Tr LED).

The training was jointly conducted by Dr. Aniket Naha, Scientist, PRC, and Mr. Aravind, Technical Personnel from Olympus. Participants received step-by-step practical demonstrations on microscope operation, routine maintenance, and optimal usage in clinical and research settings. The session also provided detailed insights into the advanced features of the MX21i-Tr LED model.

Through guided hands-on practice, the training aimed to enhance technical competence and precision among research students, supporting high-quality microscopic analysis in ongoing and future research activities at PRC.



# RESEARCH METHODOLOGY SESSIONS FOR PRC RESEARCH STUDENTS

As part of the research orientation lecture series for in-house project students at Pushpagiri Research Centre (PRC), two research methodology sessions were conducted on 24th January 2026 by PRC faculty members.

The first session, held from 2:00–3:00 PM, was delivered by Dr. Soumya R. S. on the topic “Ethics in Research,” highlighting ethical principles, regulatory requirements, and responsible conduct of research. The second session, conducted from 3:00–4:00 PM, was a hands-on training on automated reference management, led by Dr. Aniket Naha, focusing on efficient literature organization and citation practices.

These sessions aimed to strengthen the methodological foundation of research students and enhance their competencies in ethical research practices and scholarly writing.



## NOVEL PROBIOTICS STRAINS FROM DR. ANIKET'S LAB

Medical Biotechnology and Computational Drug Designing Laboratory and Microbial Technology and Infectious Disease Laboratory has been instrumental in isolating, screening and characterizing three novel probiotic strains as a result from student dissertation projects.

1. *Acetobacter orientalis* strain PRCCC1 [PX715899] – <https://www.ncbi.nlm.nih.gov/nuccore/PX715899.1/>
2. *Lactiplantibacillus plantarum* strain PRCCC2 [PX876019] – <https://www.ncbi.nlm.nih.gov/nuccore/PX876019.1/>
3. *Acetobacter orientalis* strain PRCCC3 [PX876021] – <https://www.ncbi.nlm.nih.gov/nuccore/PX876021.1/>

**Acetobacter orientalis strain PRCCC1 16S ribosomal RNA gene, partial sequence**

GenBank: PX715899.1

FASTA Graphics

LOCUS PX715899 997 bp DNA linear BCT 22-DEC-2025

DEFINITION *Acetobacter orientalis* strain PRCCC1 16S ribosomal RNA gene, partial sequence.

ACCESSION PX715899

VERSION PX715899.1

KEYWORDS -

SOURCE *Acetobacter orientalis*

ORGANISM *Acetobacter orientalis*  
Bacteria; Pseudomonadati; Pseudomonadota; Alphaproteobacteria;  
Acetobacterales; Acetobacteraceae; Acetobacter.

REFERENCE 1 (bases 1 to 997)

AUTHORS Naha,A., Rahim,R., Kumar,A.C.M. and George,E.A.

TITLE Isolation of bacteria from curd fermented with chilli

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 997)

AUTHORS Naha,A., Rahim,R., Kumar,A.C.M. and George,E.A.

TITLE Direct Submission

JOURNAL Submitted (17-DEC-2025) Medical Biotechnology and Computational Drug Designing Laboratory, Pushpagiri Institute of Medical Sciences and Research Centre, Pathanamthitta, Thiruvalla, Kerala 689101, India

**Lactiplantibacillus plantarum strain PRCCC2 16S ribosomal RNA gene, partial sequence**

GenBank: PX876019.1

FASTA Graphics

Go to: ☺

LOCUS PX876019 914 bp DNA linear BCT 21-JAN-2026

DEFINITION *Lactiplantibacillus plantarum* strain PRCCC2 16S ribosomal RNA gene, partial sequence.

ACCESSION PX876019

VERSION PX876019.1

KEYWORDS -

SOURCE *Lactiplantibacillus plantarum*  
*Lactiplantibacillus plantarum*

ORGANISM *Lactiplantibacillus plantarum*  
Bacteria; Bacillati; Bacillota; Bacilli; Lactobacillales;  
Lactobacillaceae; Lactiplantibacillus.

REFERENCE 1 (bases 1 to 914)

AUTHORS Naha,A., Rahim,R., Kumar,A.C.M. and George,E.A.

TITLE Isolation of bacteria from curd fermented with chilli

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 914)

AUTHORS Naha,A., Rahim,R., Kumar,A.C.M. and George,E.A.

TITLE Direct Submission

JOURNAL Submitted (16-JAN-2026) Medical Biotechnology and Computational Drug Designing Laboratory, Pushpagiri Institute of Medical Sciences and Research Centre, Pathanamthitta, Thiruvalla, Kerala 689101, India

**Acetobacter orientalis strain PRCCC3 16S ribosomal RNA gene, partial sequence**

GenBank: PX876021.1

FASTA Graphics

Go to: ☺

LOCUS PX876021 763 bp DNA linear BCT 21-JAN-2026

DEFINITION *Acetobacter orientalis* strain PRCCC3 16S ribosomal RNA gene, partial sequence.

ACCESSION PX876021

VERSION PX876021.1

KEYWORDS -

SOURCE *Acetobacter orientalis*

ORGANISM *Acetobacter orientalis*  
Bacteria; Pseudomonadati; Pseudomonadota; Alphaproteobacteria;  
Acetobacterales; Acetobacteraceae; Acetobacter.

REFERENCE 1 (bases 1 to 763)

AUTHORS Naha,A., Rahim,R., Kumar,A.C.M. and George,E.A.

TITLE Isolation of bacteria from curd fermented with green chilli

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 763)

AUTHORS Naha,A., Rahim,R., Kumar,A.C.M. and George,E.A.

TITLE Direct Submission

JOURNAL Submitted (16-JAN-2026) Medical Biotechnology and Computational Drug Designing Laboratory, Pushpagiri Institute of Medical Sciences and Research Centre, Pathanamthitta, Thiruvalla, Kerala 689101, India

# PUBLICATIONS

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International Dairy Journal

Journal homepage: [www.elsevier.com/locate/dairyj](http://www.elsevier.com/locate/dairyj)

Research paper

**Traditionally fermented dairy products harbouring multidrug-resistant bacteria with probiotic-associated characteristics**

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ARTICLE INFO

Keywords: Autoaggregation, Biofilm formation, Curd, Multidrug-resistant bacteria, Probiotic

ABSTRACT

This study investigated the occurrence, probiotic-like traits, and antimicrobial resistance of bacterial isolates from traditionally prepared curd produced using sugar, jaggery, and starter cultures. Molecular and phenotypic analyses identified *F. okhodensis*, *P. multocida*, and *S. aureus*. The isolates exhibited traits often associated with probiotics, such as tolerance to acidic pH, bile salts, and pancreatin, as well as moderate autoaggregation and biofilm formation, but they lacked antagonistic activity against common enteric pathogens. *P. multocida* and *S. aureus* showed high salt tolerance, whereas *P. okhodensis* demonstrated notable bile resistance. Haemolytic, DNase, and gelatinase activities were absent confirming the non-pathogenicity of these bacteria, but cholesterol assimilation was high. All strains were multidrug-resistant, particularly to  $\beta$ -lactams, cephalosporins, and macrolides. These findings raise significant food safety concerns, emphasizing that traditionally fermented dairy products can act as vehicles for antimicrobial-resistant pathogens and should undergo rigorous microbial safety assessments before probiotic claims are made.

1. Nath, Soumitra, Mainak Paul, Puja Paul, Poulomi Chanda, Aniket Naha, Hanna Yumnam, and Indu Sharma. "Traditionally fermented dairy products harbouring multidrug-resistant bacteria with probiotic-associated characteristics." International Dairy Journal (2025): 106538. (Impact Factor 3.4) The article can be accessed through <https://doi.org/10.1016/j.idairyj.2025.106538>

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RESEARCH ARTICLE

**Zero-Discharge Synthesis of Silver Nanoparticles and Activated Carbon From Agricultural Residues**

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Keywords: activated carbon | paddy agriculture waste | pollution mitigation | silver nanoparticles | water conservation | zero-water discharge

ABSTRACT

Rice husk, straw, and bran are abundant agricultural residues that generate large amounts of solid waste during rice processing. Their valorisation has been explored, with most studies focusing on the production of activated carbons (ACs). However, comparative evaluations of ACs derived from different rice residues remain lacking, and the neutralization effluent produced during AC preparation is typically discarded as liquid waste. Here, we present a zero-discharge strategy that simultaneously converts rice residues into ACs and silver nanoparticles (AgNPs), while also enabling a direct comparison across three feed stocks. Biochar produced by pyrolysis at 600 °C was chemically activated with KOH to yield ACs with hierarchical porosity and distinct surface features. The neutralization effluents, enriched in phenolic and fatty acids, were directly repurposed as reducing and stabilizing media for AgNP synthesis, thereby eliminating the need for external reagents and establishing a closed-loop process. The formation of AgNPs was confirmed by UV-vis, FTIR, HRTEM, and particle size analysis, which revealed tunable morphologies (spherical, rod-like, and core-shell) with an average diameter of ~5 nm. Mechanistic insights from <sup>1</sup>H NMR and HRMS demonstrated the involvement of effluent-derived phenolic, thiols, and hydroxy acids in Ag<sup>+</sup> reduction and stabilization. Functional assays further revealed potent antioxidant and antibacterial activities. ACs, obtained at ~64% yield, were systematically characterized using SEM, XRD, BET, TGA, and electrochemical analyses. The results were consistent with previously reported studies on individual residues. This first demonstration of neutralization effluent reuse for AgNP synthesis, combined with a comparative evaluation of ACs from multiple residues, establishes a dual, closed-loop valorization framework for agricultural waste.

2. Pulickal Mannath S, Kundu P, Athiyanihil S, Thazathethil AM, Krishna Pillai P, Sreenivasan Soumya R, et al. Zero-Discharge Synthesis of Silver Nanoparticles and Activated Carbon From Agricultural Residues. ChemistrySelect [Internet]. 2026 [cited 2026 Feb 1];11(4):e04011. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1002/slct.202504011>

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Comparative evaluation of the effectiveness of a novel composite bone substitute synthesized from eggshell-derived hydroxyapatite and fish collagen in bone regeneration of critical-sized calvarial defects in Wistar rats

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Background: Large bone deformities pose significant challenges in regenerative periodontal surgeries. A healthy underlying bone and the osteoinductive effect of the surrounding environment are the primary factors that influence bone regeneration. Collagen and hydroxyapatite are universally used bone substitutes owing to their excellent biocompatibility and biodegradability. Innovations in the osteoinductive properties of hydroxyapatite and its use in different modified forms, combining it with other materials, may result in enhanced biomechanical properties. This research utilized domestic chicken eggshells to synthesize hydroxyapatite and fish scales to extract collagen. The novel composite graft was prepared by integrating both materials. The beneficial effects of the composite graft on the healing and regeneration of bone were assessed in the calvarial bone of Wistar rats both radiographically and histomorphometrically.

3. Prathap S, Rajesh KS, Thomas Nebu G, Binsi PK, Surya S, Prathap MS, et al. Comparative evaluation of the effectiveness of a novel composite bone substitute synthesized from eggshell-derived hydroxyapatite and fish collagen in bone regeneration of critical-sized calvarial defects in Wistar rats. Front Dent Med [Internet]. 2026 Jan 12 [cited 2026 Feb 1];6. Available from: <https://www.frontiersin.org/journals/dental-medicine/articles/10.3389/fdmed.2025.1731880/full>

Engineered core-shell nanocomposite fibres incorporating bio-ceramics and bioactive molecules for wound repair

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**Keywords:**  
 Core-shell nanofibres  
 Wound healing  
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 Bioceramics  
 Fish scale-derived sHA  
 Ataxandrin  
 Bioglass  
 Electropinning

ABSTRACT

Skin plays a major role in protecting the body from external injuries and contaminants. Despite the self-healing mechanisms of the body, wound healing has several limitations, such as being time-consuming, leading to scar formation, and susceptibility to infections. In this study, a novel core-shell nanofibre membrane was designed to protect wounds and prevent secondary trauma, thereby enhancing the wound healing process. A core-shell nanofibre membrane was prepared using polycaprolactone (PCL) as the core polymer loaded with ataxandrin (ASTX) and bioglass (BG), while the shell was made from polylactic acid (PLA) containing nanohydroxyapatite (nHA) to support faster wound healing. The surface structure, morphology, and hydrophilicity of the fibres were extensively characterized. The analysis revealed uniform, well-organized, interconnected core-shell nanocomposite fibres ideal for cell adhesion and growth. *In vitro* studies have demonstrated enhanced cell viability and wound closure in mouse L929 fibroblast cells. Immune response studies on test membranes loaded with ASTX, BG, and nHA revealed strong anti-inflammatory and antibacterial activities against Gram-positive and Gram-negative bacteria. *In vivo* studies indicated favourable cellular responses and superior wound healing potential of membranes incorporated with ASTX, BG and a higher concentration of nHA. These findings highlight the potential of core-shell nanofibre membranes as an innovative wound dressing for full-thickness skin injuries, showing significant promise for biomedical applications, especially in wound healing treatment.

4. Thomas Nebu G, Gomes F, Balakrishnan R, Raju RS, Ninan N, Rajan A, et al. Engineered core-shell nanocomposite fibres incorporating bio-ceramics and bioactive molecules for wound repair. *International Journal of Pharmaceutics* [Internet]. 2026 Feb 10 [cited 2026 Feb 1];690:126533. Available from: <https://www.sciencedirect.com/science/article/pii/S0378517325013705>

**Systematic review and meta-analysis of effectiveness of cancer awareness interventions among adolescents and young adults in Low- and Middle-Income Countries.**

Sheeja Perumbil Pathrose, Kerry Sutcliffe, Fiona McDonald, Dorothy Lall, Twinkle Agrawal, Vibisha D, Anu Mary Oommen, Naveen Ramesh, Nisha Kurian, Sunu Alice Cherian, Lucie Ramjan

**Citation**

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REVIEW TITLE AND BASIC DETAILS

**Review title**

Systematic review and meta-analysis of effectiveness of cancer awareness interventions among adolescents and young adults in Low- and Middle-Income Countries.

**Condition or domain being studied**

Cancer; Health awareness; Evaluating Interventions

**Rationale for the review**

Cancer remains a significant public health concern globally, with a disproportionate burden in low- and middle-income countries (LMICs). Adolescents and young adults (AYAs), aged 10–24 years, represent a unique demographic with specific health education needs. Despite various interventions aimed at increasing cancer awareness among AYAs, there is a lack of consolidated evidence regarding their effectiveness of available intervention in LMICs.

5. Sheeja Perumbil Pathrose, Kerry Sutcliffe, Fiona McDonald, Dorothy Lall, Twinkle Agrawal, Vibisha D, Anu Mary Oommen, Naveen Ramesh, Nisha Kurian, Sunu Alice Cherian, Lucie Ramjan. Systematic review and meta-analysis of effectiveness of effectiveness of cancer awareness interventions among adolescents and young adults in Low- and Middle-Income Countries.. PROSPERO 2026 CRD420251114770. Available from <https://www.crd.york.ac.uk/PROSPERO/view/CRD420251114770>.

**Development and evaluation of a fish skin-derived acellular dermal matrix for diabetic wound healing: *In vitro* and *in vivo* assessment**

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Affiliations + expand

PMID: 41616380 DOI: 10.1177/08853282261422121

**Abstract**

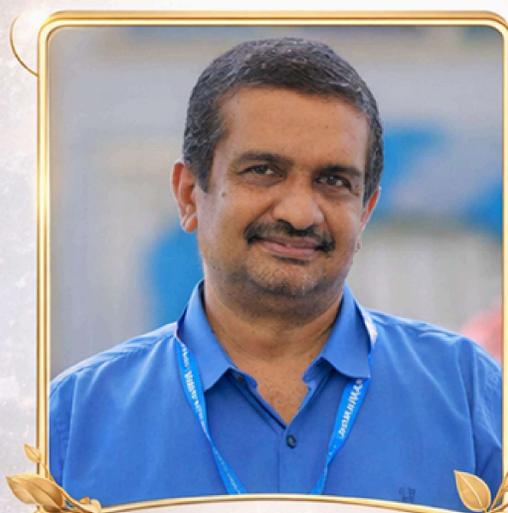
**Introduction:** Non-healing diabetic foot ulcers often result in amputation and reduced quality of life. The study objective was to develop and evaluate a novel fish skin-derived acellular dermal matrix (FSADM) for diabetic wound-healing applications, addressing these challenges. **Methods:** FSADM was fabricated from yellow fin tuna (*Thunnus albacares*) skin using a decellularization and lyophilization process. The matrix was characterized by Fourier-transform infrared spectroscopy (FTIR). *In vitro* biocompatibility was assessed using 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assays with L929 fibroblasts and hemocompatibility tests. *In vivo*, biocompatibility was evaluated through subcutaneous implantation in Sprague-Dawley rats. Wound-healing efficacy was assessed in a streptozotocin-induced diabetic rat model with full-thickness excisional wounds, comparing FSADM with commercial alternatives and untreated controls. **Results:** FTIR analysis confirmed the preservation of collagen structure in FSADM. *In vitro* studies demonstrated cytocompatibility with L929 cells and minimal haemolytic activity (0.68 ± 0.034%). Subcutaneous implantation demonstrated good biocompatibility, with a progressive reduction in the inflammatory response. In the diabetic wound model, FSADM-treated wounds exhibited significantly faster closure

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7. Varghese, Rosin George; Sobha, A.; Manjula, V. D.; Murali, Asha Joan; Areekal, Binu; Bhaskar, Anitha; Vasudevan, Bindhu; Geethadevi, M. Prevalence and determinants of bronchial asthma among children of age group 5–15 years in an urban setting in central Kerala, India: A cross-sectional study. Indian Journal of Community and Family Medicine 11(2):p 120-127, Jul–Dec 2025. | DOI: 10.4103/ijcfm.ijcfm\_2\_25

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## Hearty Congratulations!



Prof Dr Nebu George Thomas  
Scientist PRC



Prof Dr Sabu Thomas  
Adjunct Faculty PRC

— Congratulations to —  
**Dr. Nebu George Thomas & Dr. Sabu Thomas**  
on being awarded a **₹1.65 Crore**  
research grant from **DBT–BIRAC!**

Their project focuses on revolutionary seaweed-based  
nanocomposites for **Tissue Engineering**  
& **Diabetic Wound Healing.**

Keep soaring to new heights! 🚀🏆

# ACHIVEMENTS



Dr. Betsy A Jose, Assistant Professor, Community Medicine as invited Speaker on Adolescent Health at Sacred Heart Higher Secondary School & CISCE Junior College, Changanassery. This School Health Education Programme was in connection with National Youth Day celebration on 19th January 2026. The programme was organized by Department of Pharmaceutics in association with IQAC & NSS unit. Pushpagiri College of Pharmacy.



Dr. Betsy A. Jose, Assistant Professor in the Department of Community Medicine at Pushpagiri Medical College Hospital (PMCH), was invited as a guest speaker at the Amala Institute of Medical Sciences (AIMS), Thrissur, on January 11, 2026. The invitation was part of a Continuous Medical Education (CME) program titled "Newer Updates in TB Diagnosis and Management," aimed at sensitizing healthcare professionals to the latest advancements under the National Tuberculosis Elimination Program (NTEP).



Dr. Sunil Mathew, General Medicine, PIMS&RC proudly chaired the session on Gestational Diabetes Mellitus (GDM) at the prestigious APICON 2026 conference held in Patna from 29th January to 1st February 2026, contributing his expertise to one of the key scientific discussions of the event.

Angel Davis of the 2021 MBBS batch was selected to represent the KUHS Women's Chess Team following the intercollegiate selection trials held at PK Das Medical College, Palakkad on January 18th 2026. Congratulations..!!!

