



PRINCIPAL DESK

Doctors' Day – History and Significance

Everyone experiences the loving touch, healing hands, and comfort care provided by doctors at least once in their lifetime. Doctors play a great role not only in promoting and healing individual health but also contribute to the health and well-being of the communities through their research and other services. Doctors' Day is an occasion when the patients and the community can express their gratitude to the doctors practicing the noble profession. Our country celebrates Doctors' Day on July 1st every year honoring the services provided by Dr. Bidhan Chandra Roy. Apart from serving the community as a renowned Physician, he was a great freedom fighter and a politician. Following our independence, he served as the second Chief Minister of West Bengal for more than 14 years. He was popularly known as the "Maker of Bengal". In 1961, he was awarded the prestigious civilian Bharat Ratna Award. The entire country mourned his sad demise on July 1st, 1962, and his death anniversary is celebrated as National Doctors' Day. The noble profession of the doctors came to the limelight during the COVID pandemic, wherein the doctors along with other medical professionals formed the frontline warriors in fighting the pandemic and stabilizing the health of the communities. Doctors' Day was celebrated on July 1st, 2023 under the theme "Celebrating Resilience and Healing Hands," as a tribute to the services of medical professionals during the Covid Pandemic, remembering the lives saved, and condemning assaults on the medical professionals and the hospitals, and pledging to bring in legislations to ensure the safety of medical professionals at their workplace.



Observing "Reader's Week 2023" holds significant importance in learning Community

The significance of "Reader's Week" in the learning community cannot be overstated. This event, celebrated from June 19 to July 07, holds particular importance in promoting literacy and cultivating a love for books, especially within medical education. The week features a variety of engaging programs and activities aimed at encouraging reading and emphasizing the importance of education. The event is observed in honor of P.N. Panicker, the 'Father of the Library Movement in Kerala,' who championed local education and reading.

During Reader's Week, various events and programs were organized to enhance the reading culture within the Pushpagiri Institute of Medical Sciences & Research Centre. These include the 1. Maternal Library, which provides pregnant women and their bystanders with positive reading habits, fostering a bond between mother and child. 2. Medical Books Exhibition showcased valuable resources and encouraged exploration in the medical field. 3. Seminar on "Reading for Excellence in Education" highlighted the role of reading in academic and professional development. 4. Malayala Manorama's "Vayana Kalari" to promote reading habits among students through reading Malayala Manorama daily. 5. Little Free Library, encouraging the exchange of books and fostering a reading culture among the PIMS&RC community. 6. Library reader orientation programme, 7. Mathrubhumi Books Exhibition and 8. Competitive events to Engaging competitions such as "Book Talk," "Find the Author," "Find the Synonym," and "Current Affairs Quiz" to encourage participation, knowledge sharing, and friendly competition among students.

The significance of Reader's Week in the medical college is multifaceted. Firstly, it promotes literacy by encouraging students and faculty to develop a habit of reading and emphasizing its benefits for vocabulary and critical thinking. Secondly, it fosters a love for books by creating an environment where students can explore different genres and authors. This event also encourages community engagement and brings people together through shared interests in reading. Additionally, reading helps develop critical thinking and empathy by exposing individuals to diverse narratives and perspectives. Furthermore, Reader's Week contributes to enhancing academic performance by improving language skills and comprehension. By integrating reading activities and storytelling sessions, educational institutions can emphasize the connection between reading and overall educational outcomes.

In conclusion, Reader's Week serves as a catalyst for promoting literacy, fostering a love for books, engaging communities, developing critical thinking skills, and enhancing academic performance. This event celebrates the transformative power of reading, opening doors to knowledge, imagination, and personal growth for individuals of all ages.



Chandy Abraham
Chief Librarian, PIMS & RC

“PAIN REHABILITATION CLINIC” INAUGURATION

A multi-disciplinary approach is very important in the management of chronic pain in order to ensure pain-free life, functional independence, and improved quality of life. Keeping this in mind, the department of Physical Medicine and Rehabilitation (PM&R) took up the initiative to set up a special clinic for chronic pain management. On June 21st 2023, the special clinic for pain management – “Pain Rehabilitation Clinic” was inaugurated. On this occasion, Dr. Jimi Jose, Assistant Professor and In charge of the Department of PMR welcomed the gathering and spoke on why “Pain Rehabilitation Clinic” is the need of the hour. Mr. K T Chacko, ex-Santosh trophy football player and national team member, recipient of the President’s gold medal (2017) and CM’s gold medal (2011) inaugurated the clinic and delivered the inaugural address. Tiruvalla DYSP, Mr. Ashad delivered the keynote address. He stressed on the importance of alleviating the pain of patients through medical management and how it helps the suffering population. Dr. Abraham Varghese, Medical Superintendent and Dr. Sujin Chacko, Consultant Neurologist, PMCH delivered felicitation speeches on this occasion. Rev. Fr. Jose Kallumalickal, CEO, PMCH and Rev. Fr. Thomas Pariyarath, Hospital Administrator, Pushpagiri hospital also attended the function. Dr. Jainy John, Senior Resident PMR department delivered the vote of thanks.

The multi-modal approach of clinical services available under the Pain Rehabilitation Clinic include Rehabilitation Physician consultation, ultrasound-guided or non-guided interventional pain management with regenerative medicine-Prolotherapy and PRP, nerve blocks, physical and occupational therapy services, use of electrotherapy modalities, customized orthotics, exercises and lifestyle modifications, health education, ergonomics, footwear modifications, training to use appropriate assistive devices and mobility aids etc. The services of this special clinic under the Department of PMR shall be a blessing to a great number of persons suffering silently from chronic pain and it’s associated complications.



Talk on Migraine at Assumption College, Changanacherry

Dr. S Vijayalekshmi, Assistant Professor, Department of Neurology, delivered a talk on 'Migraine' at Assumption College, Changanacherry, as part of Pushpagiri Spandanam health club activity on 13th July 2023.



Doctors' day celebrations 2023

Pushpagiri family celebrated Doctor's Day to honour and appreciate the dedicated efforts of its medical staff in providing exceptional healthcare services on 30th June. The event took place in the Senate Hall. The ceremony aimed to acknowledge the hard work, commitment, and selfless service of the doctors who have been instrumental in healing and saving lives. The celebration was made even more special with the presence of the esteemed Chief Guest, Rev. Msgr. Fr. Issac Parappallil, Vicar General Archdiocese of Thiruvalla and President, Pushpagiri Medical Society. The highlight of the event was the cake-cutting ceremony, symbolizing the joyous occasion. The Chief Guest, along with Senior and Junior Doctors, led the cake cutting ceremony to mark the celebration of Doctor's Day. Following the cake cutting, a delightful high tea was organized for all attendees. It provided a congenial atmosphere for doctors, hospital staff, and guests to interact, share experiences, and build camaraderie. As a token of appreciation, the hospital management and Student's union distributed gifts to all the doctors present at the event.



INAUGURATION OF MATHRUBHUMI BOOK EXHIBITION



The Central Library at Pushpagiri Institute of Medical Sciences & Research Centre organized the Mathrubhumi Book Exhibition as part of the National Reading Month observance on 13th and 14th July 2023. The exhibition was aimed to promote reading and intellectual growth in the Pushpagiri community. It featured a comprehensive collection of various genres, including fiction, non-fiction, travelogue, motivation, self-development, and biographies in English and Malayalam. The ceremony began with a formal welcome address by the Chief Librarian, Mr. Chandy Abraham, expressing gratitude to the guests and participants. Rev. Fr. George Valiyaparambil delivered the Director's speech, highlighting the activities conducted as part of the Reading Month observance. Dr. Geena Benjamin, HOD of the Department of Radio Diagnosis, inaugurated the exhibition. She emphasized the importance of acquiring knowledge through reading and the benefits of developing reading habits in a professional career. Heads of Departments, faculty members, staff, and both postgraduate and undergraduate students were present during the inauguration. The ceremony inspired visitors to explore books and discover the joy of reading.

FLOOD RELIEF CAMPS

Department of Community Medicine conducted a Flood Relief camp along with distribution of bleaching powder to the affected families in the Family Adoption Programme (FAP) area (Idamalathara and Adambalam colony) on 13th July 2023. Around 100 families were beneficiaries of the camp. Essential medicines & Bleaching powder were distributed free of cost. Dr. Neetha Mary Kurian (Associate professor), Dr. Betsy A Jose (Assistant Professor), Dr. Preetha, Dr. Gayathri, Dr. Roshna (PGs), Mrs. Monai, Mrs. Shyni, Mrs. Bindhu, Mrs. Sinimol (Health educator & Health Inspectors) and House surgeons attended the programme. Dr. Betsy A Jose and Mrs. Monai coordinated the program with Mrs. Sheeja (ward member).

A team from the department consisting of Dr. Roshna, Dr. Hari, Dr. Joe, Dr. Gopika and Dr. Haritha, conducted mobile medical camps at the government flood relief camps in Vengal – Peringara Panchayat on 8th July 2023. The medical team covered four camps set up at schools and auditoriums in the area and distributed free medicines.



NATIONAL WORKSHOP- "WHAT DO EDITORS LOOK FOR IN A MANUSCRIPT?"



Pushpagiri Institute of Medical Sciences & Research Centre, Tiruvalla in association with Elsevier organized a National Workshop on- "What do Editors look for in a Manuscript" on 20th July 2023 at senate hall. The workshop aimed to provide valuable insights into the expectations of editors while evaluating and selecting manuscripts for publication.

The key objectives of the workshop were Main reasons for Manuscript rejection, Key elements that attract Editors attention, Pitfalls in drafting introduction, Methodology, Results and Conclusions, To provide tips and guidelines for authors to enhance their chances of getting published.

The event started with a warm welcome and opening remarks from Dr. Vikram Gowda, (Vice Principal- Administration PIMSRC). Dr. Tomy Philip, (Principal, PIMSRC) emphasized the significance of understanding the perspectives of editors to navigate the publication process effectively. This event was initiated and coordinated by the Central Library Team, Pushpagiri Institute of Medical Sciences & Research Centre. This session focused on the essential elements of a manuscript, including title, abstract, introduction, methodology, results, discussion, conclusion, and references. Ms. Natasha Gulati from Elsevier initially emphasized the need for clarity, conciseness, and logical flow in presenting research findings. Dr. Ximena Alvira, Clinical and Research Specialist and Doctor of Neuroscience, Elsevier Health, an expert in research from Spain was the resource person. She discussed the ethical considerations that editors take into account during the review process. She also shared valuable insights into identifying the most appropriate journals for submitting research papers. Factors such as the scope of the journal, target audience, and previous publications were discussed. This session explained the significance of the peer-review process in maintaining the quality of scholarly publications. The workshop saw active participation from Researchers, Academicians, Clinicians, Scientists, Postgraduate students, and professionals from diverse scientific and medical backgrounds. The attendees were eager to gain insights into the best practices for manuscript preparation and submission to maximize the chances of acceptance in reputed journals. The workshop concluded with a stimulating panel discussion. The panellists answered participants' questions and engaged in thoughtful discussions on various aspects of manuscript submission and editorial processes. The event fostered a greater understanding of the editorial expectations and ethical considerations involved in manuscript submission and publication. The workshop enhanced the knowledge and skills of attendees, better equipped to prepare and submit their research work for publication in reputable journals.



HEALTH EDUCATION SESSION ON MONSOON DISEASES

To create an awareness about monsoon diseases and to prevent its occurrence, Department of Community Medicine, had organized a health education session at the field practice area of Urban Health Centre, Mathilbhagam. The session was coordinated with the help of Asha Worker of the locality, Smt. Vijayalekshmi, at a residence in Chakrasalakadavu, Mathilbhagam on 14th July 2023. An insight about the etiology of various airborne, waterborne and vector borne diseases, signs & symptoms, warning signs, precautions & preventive measures of the diseases and prophylactic measures were discussed by Dr. Roshna Rasheed (PG Resident).



CME on “Challenges in the treatment of monsoon diseases”

The Department of General Medicine, Pushpagiri Medical College Hospital, conducted a CME in collaboration with District Medical Office, Pathanamthitta and IMA Thiruvalla -“Challenges in the treatment of monsoon diseases” on 2nd July 2023, at Senate Hall, Pushpgiri Hospital. The CME was inaugurated by Dr. Anitha (DMO Pathanamthitta), who lighted the lamp in the presence of Dr. Tomy Philip (Principal, PIMS & RC), Prof. C. A Abdul Khadir, (HOD, Department of General Medicine & Organizing Chairman) and Dr. Sajin Chacko, (Organizing Secretary). This educational feast was attended by more than 100 delegates comprising of physicians, general practitioners, and post-graduates from hospitals and medical colleges of different parts of Kerala. The CME consisted of 6 interactive lectures delivered by eminent speakers from Kerala, lasting from 10 am to 1.30 pm, followed by a panel discussion.



CME ON “TUBERCULOSIS - RECENT UPDATES AND EVALUATION CHALLENGES”

The Department of Community Medicine, Pushpagiri Institute of Medical Sciences and Research Centre (PIMS&RC) had organized a CME on Tuberculosis: Recent Updates and Evaluation Challenges on 1st July 2023. The main objective of this CME was to understand the recent guidelines in the management of drug resistance Tuberculosis (TB), the role of monitoring and evaluation (M&E) in TB, differentiation between M&E and impact evaluation and the practical difficulties faced during various evaluation processes. There were a total of 36 participants (29 offline and 7 online) in the program and had an accreditation of 1 TCMC credit hour.

The first session was about an hour long and was taken by Dr. Jeena Ramesh (Associate Professor, Community Medicine, Government Medical College, Kollam). Dr. Jeena covered different aspects such as Overview of monitoring and evaluation, its relevance in healthcare delivery and Challenges uniquely posed by healthcare sector towards M&E.

This was followed by a session by Dr. Sanjeev Nair (Chairman, Zonal Taskforce for Medical Colleges, NTEP South zone II, Chairman, State working group for Latent TB infection, Kerala, Professor (CAP), Department of Pulmonary Medicine, GMC, Thrissur, Subject expert, National Technical Expert Group, NTEP) and had the contents such as Drug resistant TB, management and adherence issues, Latent TB/ Long term impact of TPT/ Implementation challenges, Effectiveness of the programme in addressing these issues, An overview of national level evaluation programmes in TB.

The whole session, including question and answer period, went on for about 2 hours. The final session that lasted for about an hour was taken by Dr. Sherin Susan Paul N (Professor, Community medicine, PIMS&RC) and covered the topics “What is impact evaluation and its role in TB evaluation, Implementation challenges.”

Overall, the whole CME was a very intense, four hour programme which was quite useful not just for the listeners but for the presenters as well. The whole programme concluded by honouring the speakers and having the lunch.





MEDICAL CAMP FOR PILGRIMS

A medical camp was conducted on 18th July 2023, for a group of pilgrims visiting Kerala from Punjab, at Senate Hall. Dr. Roshna Rasheed and Dr. Hanna Susan Reji from the Department of Community Medicine led the camp



DRUG ABUSE AWARENESS SESSION

An awareness class was organized by the Thiruvalla Taluk Legal Services Committee for the first year MBBS students on 26th of June, 2023, the International Day against Drug Abuse & Illicit Trafficking. The session was conducted at 9 am in the Lecture hall 1. The session was inaugurated by Sri. Aravind S J, Munsiff, Thiruvalla. The awareness class was conducted by Adv. Sreejith Thusidas. Rev Fr. George Valiyaparambil (Director) and Dr. Gaddam Vijaya Lakshmi (Vice Principal, UG studies) also spoke on the occasion. The program was coordinated by Mr. Vishnu Sudhakaran, Taluk Legal Services Committee, Thiruvalla & Mallappally Taluk.



YOUNG INNOVATORS PROGRAM ORIENTATION

An orientation program for the Young Innovators Program was organized by the K-DISC (Kerala Development Innovation and Strategic Council), Pathanamthitta District on June 13th 2023 at the Senate Hall at 3pm. The MBBS students of the 2020 and 2021 batches attended the program. The program was conducted under the expertise and coordination of Mr. Jinto Sebastian (Senior program executive, K-DISC), Ms. Meenu Shine (District Coordinator, K-DISC) and Ms. Susan Serah Koshy (Student intern, YIP).

The students were briefed about the program, and its vision. Hands on training was given for the formation of teams, and registration into the site. Broad areas of generation of ideas were discussed in brief, and the teams were asked to come up with ideas and register their ideas at the YIP portal.



PUSHPAGIRI RESEARCH CENTRE UPDATES

Breaking News:

Cutting-Edge Christ Freeze Dryer Model 'Alpha 1-2 LscBasic' Lyophiliser Machine Arrives!

Dear esteemed researchers and doctors and valued Readers,

We are thrilled to announce a groundbreaking addition to our research equipment - the highly advanced Christ Freeze Dryer Model: Alpha 1-2 LscBasic Lyophiliser Machine with Chemical Resistant Pump. This state-of-the-art lyophilizer has been installed in our facility, bringing with it a myriad of opportunities for groundbreaking research and advancements in various scientific disciplines.

What is the Christ Alpha 1-2 LscBasic Lyophiliser Machine?

The Christ Alpha 1-2 LscBasic Lyophiliser Machine is a cutting-edge freeze-drying system designed to preserve and extract delicate substances without altering their chemical structure. With this revolutionary equipment, we can now efficiently freeze-dry organic materials, such as pharmaceuticals, biological samples, and various research specimens, all while maintaining their original properties.

Key Features:

- 1. Chemical Resistant Pump:** The inclusion of a chemical resistant pump in this model ensures greater safety and longevity, allowing us to work with a wider range of substances, including potentially hazardous chemicals.
- 2. Advanced Freezing Technology:** The Alpha 1-2 LscBasic utilizes cutting-edge freezing technology to ensure precise and uniform freezing of samples, minimizing any damage caused during the process.
- 3. User-Friendly Interface:** The lyophilizer is equipped with an intuitive user interface, enabling researchers and technicians to operate the machine efficiently, saving time and effort.
- 4. High Capacity:** The Alpha 1-2 LscBasic boasts an impressive capacity, accommodating larger batches of samples, thereby increasing our research throughput.

What it means for Pushpagiri Research Centre:

The acquisition of the Christ Alpha 1-2 LscBasic Lyophiliser Machine marks a significant milestone for our research center. Its advanced capabilities unlock the potential for conducting cutting-edge experiments and accelerating our scientific discoveries. Researchers across diverse fields will now have access to a powerful tool that aids in studying complex biological processes, developing novel pharmaceutical formulations, and preserving valuable samples for future investigations.

THE INDO- OMAN PROJECT TEAM



INDO –OMAN PROJECT ON UTILIZATION OF FISH SKIN AND COLLAGEN-BASED SCAFFOLDS FOR WOUND HEALING

Research Team :

Principal Investigator: Dr Jayachandran V.P- Co- Principal Investigators: Dr Umaima Al Hoqani, Dr, Shinisha Sujesh, University of Technology and Applied Sciences, Muscat, Sultanate of Oman

Co investigators : Dr Nebu George Thomas, Pushpagiri Research Centre,

Research Assistant : Mr. Nikhil Krishnan, Pushpagiri Research Centre,

Funding Agency : Ministry of Higher Education, Research and Innovation (MoHERI, Muscat, Sultanate of Oman)

The fishing industry produces a significant amount of waste, including fish scales , skin, bones etc and these wastes are often discarded. Waste management of fish processing industries is a potential theme as untreated waste may lead to offensive odor and have both health and environmental implications. One potential value-added product from fish waste is collagen. The utilization of fish waste to produce value-added products could help to reduce the environmental impact of the fishing industry and create new economic opportunities. Collagen is a natural substance that has a variety of applications, including wound healing, tissue engineering, and cosmetics. Fish skin is a rich source of collagen, and it could be used to produce collagen-based products. Traditional wound dressings, such as gauze and bandages, provide a physical barrier to protect the wound from infection. However, they do not provide any support for the healing tissue, and they can actually delay healing by adhering to the wound bed. over traditional wound dressings. Collagen is a natural substance that is found in the skin, and it is biocompatible and biodegradable. This means that it is non-toxic to the body and it will eventually be broken down and absorbed by the body. Fish collagen-based scaffolds are a promising new type of wound dressing that offers several advantages over traditional wound dressings. Fish skin is also a sustainable and affordable source of collagen. The utilization of fish waste to produce value-added products could help to reduce the environmental impact of the fishing industry and create new economic opportunities. The findings jointly made by the team is going to be patented soon. Proposed project is to develop marine based composite scaffolds for tissue engineering applications.

Institutional Animal Ethics Committee (IAEC)

An institutional animal ethical meeting was conducted at Pushpagiri Research Centre on 29th July 2023 at 10. a.m. The main nominee for this meeting was Dr. Sachin J Shenoy, Scientist (Veterinary), Division of In vivo Models and Testing, Department of Applied Biology, Biomedical Technology Wing Sree Chitra Tirunal Institute of Medical Sciences And Technology.

Dr. Santhosh Pillai, (Professor& HOD Department of Pharmacology)Chairman IAEC;

Dr. Soumya R.S, (Scientist Pushpagiri Research Centre)Member Secretary IAEC;

Dr. Punya Chandran, (Assistant Professor Department of Physiology) Scientist from different biological discipline;

Dr. Sreeja Nair, (Assistant Professort Department of Microbiology)Scientist from different discipline;

Dr. Unni Krishnan K, Veterinarian; **Dr. Sibi P.I**, Socially aware nominee, and **Dr. Nishant Kumar Gupta**, Link Nominee, attended the meeting. 13 proposals were presented for ethical sanction. The meeting came to an end at 3.30 pm, along with an Animal house visit by the IAEC members. The next IAEC meeting is on December 2023.



ACHIEVEMENTS...

CONGRATULATIONS

Dr. G. Meenu and Dr. Bety Thomas postgraduate students from Department of Periodontology, Pushpagiri Dental College got selected as District level winners as part of Young Innovation Programme 4.0 and received cash prize of 25,000/-felicitated by honourable finance minister Sri.K.N.Balagopal. Both the projects were initiated at tissue engineering lab of Pushpagiri Research Centre under the guidance of **Dr. Nebu George Thomas And Dr. Yogesh Dalvi.**



2) Tissue Engineering and Regenerative Medicine lab of Pushpagiri Research Center in association with Center Institute of Fisheries Technology (CIFT) Kochi developed Bioceramic Hydroxyapatite based bone graft from fish source for Dental Regeneration. Indian Council of Agriculture Research approved the product as a new technology with reference number ICAR-FS-CIFT-Product-2023-054. Dr. Nebu George Thomas, Head of Tissue Engineering and Regenerative Medicine lab, Dr. Yogesh Bharat Dalvi, Scientist, Pushpagiri Research Center and Dr. P.K. Binsi Senior Scientist, CIFT are involved in this project. Rev. Dr. Mathew Mazhavancheril, Director Pushpagiri Research Center stated that this invention will help to provide high end treatment in dentistry to common people at an affordable cost. This collaboration holds promising potential for advancing healthcare solutions and enhancing the field of periodontal regeneration.

MoUs

Pushpagiri Research Centre Collaborates with HLL Lifecare Ltd. for Novel Antibacterial Membrane Development

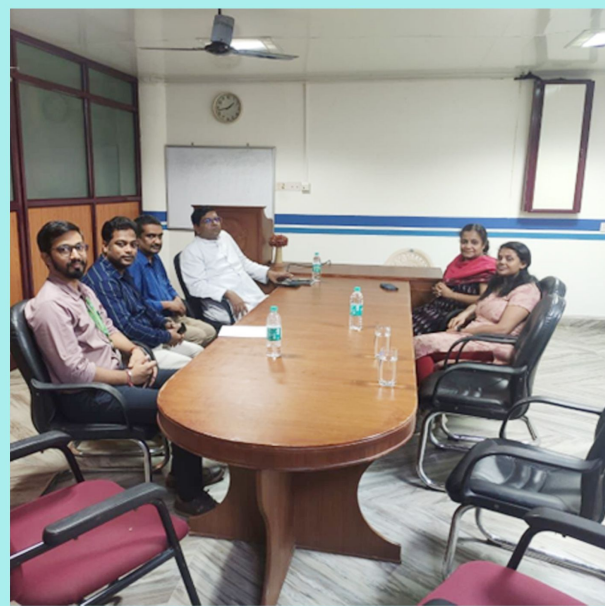
In a significant step towards medical innovation, the first Memorandum of Understanding (MoU) review meeting between Pushpagiri Research Centre (PRC) and Corporate R&D Centre, HLL Lifecare Ltd., took place on July 14, 2023. The meeting, held at the conference hall of PRC at 12.00 Noon, saw the participation of esteemed members from both organizations

Representing PRC were Rev. Dr. Mathew Mazhavancheril, the Research Director, along with three distinguished research scientists, Dr. Nebu George Thomas, Dr. Yogesh Dalvi, and Dr. Aniket Naha.

From the Corporate R&D Centre, HLL Lifecare Ltd., Dr. Rosemary M J, a Scientist E3, and Ms. Sneha Letha S, a Technical Associate, were present.

The main focus of the discussion revolved around exploring new strategies for developing a novel antibacterial membrane dedicated to periodontal regeneration. The efficacy of these advancements will be validated following the ISO 10993 guidelines

This collaboration holds promising potential for advancing healthcare solutions and enhancing the field of periodontal regeneration.



Pushpagiri Research Centre and St. John Research Institute (SJRI) Enter a Memorandum of Understanding (MoU) for Collaborative Research and Education



St. John's
Research Institute



PUSHPAGIRI
We care God cures

**RESEARCH
CENTRE**

We are delighted to announce a significant partnership between two distinguished institutions in the fields of research and education. Pushpagiri Research Centre (PRC) and St. John Research Institute (SJRI) have officially entered into a Memorandum of Understanding (MoU) with the aim of fostering collaborative teaching, research, and exchanges, ultimately propelling the pursuit of knowledge and scientific progress. The MoU was formally signed and executed by Rev. Dr. Mathew Mazhavancheril, Research Director of Pushpagiri Medical Society, and Rev. Dr. Paul Parathazham, Secretary of St. John's Research Institute. This joint endeavour holds great promise for advancing academia and making significant contributions to the world of research.

PUBLICATIONS

Results in Materials 19 (2023) 100415



Contents lists available at ScienceDirect

Results in Materials

journal homepage: www.sciencedirect.com/journal/results-in-materials



Air-jet spun PHBV/PCL blend tissue engineering scaffolds exhibit improved mechanical properties and cell proliferation

Sumama Nuthana Kalva^{a,b}, Yogesh B. Dalvi^c, Noorunnisa Khanam P^a, Ruby Varghese^{c,d},
Imran Ahammed^e, Robin Augustine^{a,b,*}, Anwarul Hasan^{a,b,**}

^a Department of Mechanical and Industrial Engineering, College of Engineering, Qatar University, PO Box 2713, Doha, Qatar

^b Biomedical Research Center (BRC), Qatar University, PO Box 2713, Doha, Qatar

^c Pushpagiri Research Centre, Pushpagiri Institute of Medical Science & Research, Tiruvalla, Kerala, 609101, India

^d Department of Chemistry and Biochemistry, School of Sciences, Jain Deemed to be University, Bengaluru, Karnataka, 560027, India

^e Baul's Degree College, Yemmiganur, Andhra Pradesh, 510360, India

ARTICLE INFO

Keywords:

Air-jet spinning
PHBV
PCL
Scaffolds
Tissue engineering

ABSTRACT

This study aimed to optimize the preparation parameters for air-jet spun blended poly(3-hydroxybutyrate-co-3-hydroxyvalerate) (PHBV) and polycaprolactone (PCL) submicron fibrous scaffolds. Blends of PHBV and PCL were made using different weight ratios of polymers and examined for their mechanical, morphological, and biological properties. The 50/50 ratio PHBV/PCL blend scaffolds showed better overall mechanical properties compared to the scaffolds with higher PHBV content and provided better cell attachment and proliferation compared to PCL scaffolds. The incorporation of PCL improved the degree of crystallinity, thermal stability, and mechanical properties of PHBV/PCL blend scaffolds. In vivo subcutaneous implantation and subsequent histological analysis of the implanted scaffolds indicated that the scaffolds were compatible with animal tissues. The findings show that air-jet spun PHBV/PCL blended scaffolds in a 50/50 ratio can be employed in many tissue engineering applications.

ACHIEVEMENTS



Dr. Jasmin Podimon, PG Resident, Department of General Medicine won 2nd prize in RSSDI Kerala Chapter meeting at pala for the presentation -- " A diabetic with disproportionate weight loss "



Dr. P. Sukumaran, Dr. Mathew Ninan and Dr. Midhun M (Department of Respiratory Medicine) represented PIMSRC as faculty members at the State Conference of Indian Chest Society - Kerala Chapter on Sunday 16th July 2023 at IMA House Kochi



Congratulations Dr. C.A Abdul Khadir (Department of General Medicine, PIMS&RC) for receiving FRCP (RCP London) from the President Sara Clark 19th July 2023

APPOINTMENTS

Dr. Sestin Sebastian is appointed as Assistant Professor in the Department of Biochemistry from 10th July 2023.



Dr. V. L Jayaprakash is appointed as Professor in the Department of Cardiology from 11th July 2023.

Dr. Febin Joseph Panicker is appointed as Junior Resident in the Department of IHBT from 17th July 2023





Dr. Ambili R Nath is appointed as Senior Resident in the Department of Pathology from 18th July 2023.

Dr. Joel J James is appointed as Junior Resident in the Department of Community Medicine from 10th July 2023



Dr. Anandasree is appointed as Junior Resident in the Department of Neuro Surgery from 31st July 2023.

PROMOTIONS



Dr. Bency Koickal Thomas (Department of Respiratory Medicine) has been promoted to Associate Professor from 22nd July 2023

PUSHPAGIRI CLINICAL CLUB NEWS

The sessions of Clinical Club were conducted in the Month of July. Topics taken and their respective speakers were as follows:

- ▶ Abdominoplasty - the Science behind the Art - Dr. Chintu Sabu George
- ▶ Pain Rehabilitation and Regenerative Medicine - Dr. Jimi Jose
- ▶ " At the Gates of Death " - Dr.Keerthi.V.R
- ▶ “ The Opioid Paradox ” - Dr. Sherin Susan Paul

Conveners Capsule – Soft Doctor Series Speakers for the month were:

Dr. Cyril Joseph
Dr.Sr. Betsy Thomas Tharayil
Dr. Mathew Pulicken
Dr. P. T. Thampi

Chief Editor : Rev. Fr. George Valiyaparambil
Email : directormedicalcollege@pushpagiri.in

Published by
Pushpagiri Institute of Medical Sciences & Research Centre, Tiruvalla

Editorial Team : Dr. Nithin K Raju
: Dr. Dona Dominic
: Dr. Leya Elizabeth Babu
Email : newsletter@pimsrc.edu.in
Design & Layout : Anand P. S
: publicrelations@pimsrc.edu.in