



MAR BASELIOS DENTAL COLLEGE

KOTHAMANGALAM, ERNAKULAM, KERALA, INDIA - 686 691

(Affiliated to Kerala University of Health Sciences)

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E-mail : mbdc2002@gmail.com Website : www.mbdc.edu.in

Date :

MEMORANDUM OF UNDERSTANDING

by and between

Pushpagiri College of Dental Sciences, Pushpagiri Medicity Road,
Perumthuruthy, Thiruvalla, Kerala, India

And

Mar Baselios Dental College, Kothamangalam, Ernakulam, Kerala, India

1) PREAMBLE:

This Memorandum of Understanding (MOU) is entered into by Pushpagiri College of Dental Sciences, Pushpagiri Medicity Road, Perumthuruthy, Thiruvalla, Kerala, India and between Mar Baselios Dental College, Kothamangalam, Ernakulam, Kerala, India are referred to collectively, as "Parties" or individually as "Party".

2) PURPOSE:

The Parties recognize the benefits to be desired from increased collaboration, cooperation and interaction for the further promotion and understanding in the field of dental education, research in dentistry, consultancy, scholarships and faculty development through various activities. (here after collectively, referred to as "Field").

The purpose of this MOU is to define the areas of fundamental, academic research in which the parties desire to Work together in the future for their mutual benefit to foster a collaborative framework between Pushpagiri College of Dental Sciences, Pushpagiri Medicity Road, Perumthuruthy, Thiruvalla, Kerala, India and Mar Baselios Dental College, Kothamangalam, Ernakulam, Kerala, India in the fields with the view to benefiting from each other's, strengths, initiatives and working procedures and to support collaboration among the researcher's associated with both parties.



3) SCOPE:

This MOU sets forth the intentions of the parties for increased collaborations, cooperation and interaction and doesn't create any legally binding commitments, if the parties later agree to undertake, specific joint projects with legally binding obligations, they will develop separate written agreements for such projects, setting out each party's contributions, deliverables and budgets.

Both parties agree to cooperate, subject to availability of funds and the respective approvals of both the institutions in academic activities and programs, research and consultancy activities and other areas of mutual interest including specifically the following:

- a) Exchange of students Post Graduate students
- b) Exchange of faculty or staff.
- c) Joint research activities and publications.
- d) Participation in seminars and academic activities.
- e) Exchange of academic materials and other information.
- f) Special short term academic programs.
- g) Specific training projects in the area of research and cooperate in clinical training.
- h) Faculty development programs.
- i) Consultations services for curriculum development.
- j) Other areas of interest and collaborations as shall be identified.

The terms of cooperation of each specific activity implemented under this MOU for Cooperation's shall be mutually discussed and agreed upon in writing by both universities prior to the initiation of that activity. Any such MOUs entered into, as outlined above, will form appendices to this MOU for cooperation.

• STUDENT EXCHANGE PROGRAM

- The host College has the right to decide acceptance of exchange students, by taking account of recommendation issued from home College for exchange students based on their academic record.
- Transportation, accommodation, food clothing and other personal costs including the medical health insurance and medical care will be the personal responsibilities of the students themselves. However the host university may charge an amount for providing laboratory, library, internet facilities etc. the amount will be intimated at the time of making an offer.



- The host College shall reserve or make available accommodation on campus for exchange students or assist them in locating suitable housing off campus if they so desire.
- The exchange students will be subject to the student rules at the host College, while on exchange. Exchange students will be offered the same facilities as local students.
- Exchange students will study subjects or conduct researches which are pertinent to their field of study and are offered by the host College.
- Any intellectual property developed during the joint activity will be joint owned by the two Colleges

• **FACULTY EXCHANGE**

The two Colleges will actively seek to promote mutual faculty exchange for mutual agreed periods.

- Faculty exchange may assume various forms, such as individual short-time and long term visit of facilities joint research and development projects.
- Both Colleges will try to seek external funding success to facilitate these exchanges.
- Encouragement of the academic faculty to co-author publications. Joint research activities and joint project possibilities is in subject to applicable copyright and/or other laws of each county, as well as rules and regulations of the respective universities.
- The host Colleges will endeavour to as much as possible, make available such facilities that will enable the faculty to obtain experience and training in its departments and institutes. Including the use of its laboratories and libraries.
- The two Colleges acknowledge that in the absence of an external funding agency, all expenses for travel. Living and allied cost will be left to the discretion and the responsibility of the home College.
- Any intellectual property developed during the joint activity will be jointly owned by the two Colleges.



4) COSTS:

Each Party will be responsible for its own costs in connection with all matters relating to collaborations under this MOU. Where possible and appropriate the Parties may also seek funding for collaborative activities from other agencies and institutions as appropriate.

5) INTELLECTUAL PROPERTY AND CONFIDENTIAL INFORMATION:

The treatment of intellectual property rights developed through collaborations under this MOU will be determined between the Parties through mutual consultation and separate written agreements to be entered on a case-by-case basis.

The parties agree that there is no intention to share any confidential or proprietary information in any collaboration under this MOU. If either Party wishes to disclose information that it considers to be confidential or proprietary to the other Party, the Parties will enter into a written, Confidentiality and Non-Disclosure Agreement for each such requirement.

6) TERMS OF UNDERSTANDING:

- a) This MOU will remain in force from the date of signature by both parties and shall continue in effect until either of the Parties expresses, in writing, to the other, a desire to terminate. Such termination shall have no effect on any outstanding obligations contractually agreed upon between the parties in an Activity Agreement.
- b) The MOU may be terminated by either Party by giving one year's notice, in writing, to the other Party.
- c) Any Amendment to the MOU will require the written approval of both Parties.
- d) Two signed originals of this MOU will be produced with one to reside with each Party.
- e) In the event that discrepancies arise between this document and any translation of it to a language other than English, this English version shall prevail.
- f) This MOU will be valid for a period of five years from the date of signature by both parties.



7) SIGNATURES:

The Parties to this Memorandum of Understanding hereby confirm their agreement to the terms contained herein by their signatures below:

**For, Pushpagiri College of Dental Sciences,
Pushpagiri Medicity Road, Perumthuruthy,
Thiruvalla, Kerala, India**

**Dr. ABY MATHEW T, Principal
Pushpagiri College of Dental Sciences, Pushpagiri
Medicity Road, Perumthuruthy, Thiruvalla,
Kerala, India**

**Dr. Aby Mathew T. MDS
Principal**

Date : 16.06.2022 of Dental Sciences



**For, Mar Baselios Dental College,
Kothamangalam, Ernakulam**

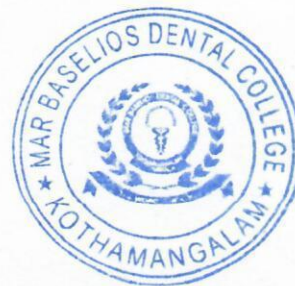
**Prof. Dr. BYJU PAUL KURIAN
Principal,
Mar Baselios Dental College,**

Kothamangalam, Ernakulam

**DR. BYJU PAUL KURIAN
PRINCIPAL**

**MAR BASELIOS DENTAL COLLEGE
KOTHAMANGALAM- 686 691**

Date : 16.06.2022





Memorandum of Understanding (MoU)

Date: 07/09/2022

THIS AGREEMENT is dated the last date on which it is executed.

BETWEEN:

Department of Periodontology, Pushpagiri College of Dental Sciences, Perumthuruthy, Thiruvalla, Kerala-689107, India

AND

Dental Health Department, College of Applied Medical Sciences, King Saud University, Riyadh- 11433, Saudi Arabia

NAME OF THE RESEARCH PROJECT

Perception of COVID-19 booster dose vaccine among healthcare workers in India and Saudi Arabia

Perception of Indian Medical and Dental practitioners regarding the 2022 outbreak of Monkey Pox disease

SCOPE OF THE MEMORANDUM OF AGREEMENT

The parties wish to conduct research and development with a view to achieving agreed research objectives through a research project on the terms and conditions set out in this Agreement.

IT IS AGREED AS FOLLOWS:

1. RESEARCH PROJECT

- 1.1 Each party agrees to carry out obligations in accordance with all the latest guidelines on research ethics, brought out by Indian Council for Medical Research or any governmental agency responsible for the same. All research will also comply to the law of the land, wherever the research and data collection is being done.
- 1.2 Each party must:
 - (a) bear its own costs under this Agreement;
 - (b) obtain and comply with all required authorisations from government agencies and ethics committees which are required for the Research Project
 - (c) not knowingly infringe, and use its best endeavours not to infringe, the Intellectual Property rights of any person in carrying out the Research Project

2. REPRESENTATIVES AND NOTICES

- 2.1 Each party nominates as its initial representative for this Agreement the person set out in the relevant schedule.
- 2.2 Any communication under this Agreement shall be written and sent to the recipient's representative as set out in the relevant schedule for that recipient party.

3. PROJECT INTELLECTUAL PROPERTY(IP)

- 3.1 Except for copyright in a student thesis Project IP will be jointly owned by the parties as tenants in common in a pre-specified proportion (mentioned in 3.5) and no party may:
- (a) grant a licence of its share of any Project IP; or
 - (b) assign its share of the Project IP,
- without the written consent of all parties, which shall not be unreasonably withheld.
- 3.2 The parties agree that copyright in a student thesis will be owned by the student but the party responsible for the student will ensure that the student enters into a written agreement which is consistent with this Agreement before the student commences any Research Project activities.
- 3.3 The parties will notify each other of any Project IP that might have commercial potential and the parties will negotiate in good faith the terms of any Commercialisation of the Project IP so as to share fairly any associated commercial return.
- 3.4 The parties are committed to appropriate recognition of contributions to invention and exploitation of intellectual property for the benefit of the Australian community.
- 3.5 *[Fill in the details on the proportion of Project IP with each party]*

4. PUBLICATION

- 4.1 At least 28 days prior to any publication, the publishing party will provide a copy of the proposed publication to each other party.
- 4.2 The other parties may provide comments and/or reasonable amendments to the publication to protect their Confidential Information and/or Intellectual Property provided they are given to the publishing party in writing no later than 14 days before the publication is proposed. If no such comments or amendments are provided within those 14 days the publishing party can publish.
- 4.3 All publications will recognise the contribution by the parties to the Research Project.

5. TERMINATION

- 5.1 Within 14 days after the termination of this Agreement (or research project whichever is earlier), the parties will return all Confidential Information and property belonging to the other parties.

6. INSURANCE AND INDEMNITIES

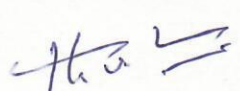



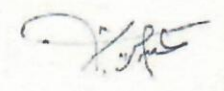

- 6.1 Each party shall effect and maintain adequate insurance to cover its conduct in the Research Project, if legally required so.
- 6.2 Each party agrees to indemnify (and keep indemnified) each other party against all losses or liabilities incurred by that other party and all costs actually payable by that other party in relation to claims against that other party, including legal costs, arising directly from any negligent or unlawful act, error or omission by the First Party in connection with this Agreement.

7. GENERAL

- 7.1 This Agreement constitutes the entire agreement and understanding between the parties with respect to the subject matter of this Agreement.
- 7.2 Any variation of any term and condition of this Agreement or the Research Project shall only be made in writing and executed by all parties.
- 7.3 A party may not assign the rights and obligations arising under this Agreement without the prior written consent of the other parties.

- 7.4 The parties are independent contracting parties and nothing in this Agreement makes any party the employee, partner, agent, or legal representative of any other for any purpose whatsoever, nor does it grant either party any authority to assume or to create any obligation on behalf of or in the name of any other.
- 7.5 This Agreement does not preclude any party engaging in research or other activities similar or in competition with the Research Project or its subject matter.
- 7.6 This Agreement is governed by the laws of the Republic of India and each Party submits to the jurisdiction of the courts of the respective States, where the parties are based.
- 7.7 Each party acknowledges that it has received valuable consideration for entering into this Agreement
- 7.8 Schedule 1 and 2; and Annexure A is an integral part of this document
- 7.9 This clause 7 and clauses 2, 3, 4 and 6 shall survive the expiry or termination of this Agreement.

EXECUTED as an agreement by the parties on the last date hereinafter appearing.

Institution	Name and Signature of Authorised Signatory	Date of signing by Authorised Signatory
Principal, Pushpagiri College of Dental Sciences, Thiruvalla	Dr. Aby Mathew T	
Department of Periodontics Pushpagiri College of Dental Sciences, Thiruvalla	Dr. Thomas George	
Professor, Pushpagiri College of Dental Sciences, Thiruvalla	Dr. Nebu George Thomas	
Dental Health Department, College of Applied Medical Sciences, King Saud University	Dr. Sajith Vellapally	
Dental Health Department, College of Applied Medical Sciences, King Saud University	Dr. Abdulaziz Abdullah Al-Khuraif	
Dental Health Department, College of Applied Medical Sciences, King Saud University	Dr. Sachin Naik	



Memorandum of Understanding

Objective:

- Shared commitment to create advocacy to provide a centralized pooling of data on Oral Potentially Malignant Disorders and Oral Cancer cases across the Nation.
- To create a database that will not only provide us with oral cancer statistics but shall also support us in planning and building strategies for fighting the increasing occurrence of Oral Cancer in our Country.

Parties collaborating:

- A. **Indian Dental Association (IDA):** Indian Dental Association (IDA) is an independent and recognized voice of dental professionals in India. IDA has its registered office at: Indian Dental Association Head Office, 3rd Floor Unit no.3A & B Zone 1, 88C, Old Prabhadevi Rd, Prabhadevi, Mumbai, Maharashtra 400025
- B. **Name of Dental College with address:** PUSHPAGIRI COLLEGE OF DENTAL SCIENCES, PUSHPAGIRI MEDICITY, PERUMTHURUTHY, THIRUVALLA, KERALA-689107

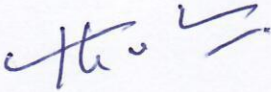

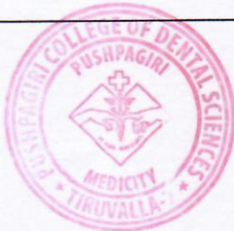

Commitment to Action:

The parties recognize that the people of the Country, suffering from Oral Potentially Malignant Disorders and Oral Cancer are yet to benefit from early diagnosis, awareness and quality oral cancer treatment.

1. Party A will provide Party B with the software to enter all the information regarding Oral Potentially Malignant Disorders and Oral Cancer cases and maintain the database.
2. Party B will systematically collect the said data in order to understand **trends in oral cancer occurrence over the Country**, and enter it in the National Oral Cancer Registry (NOCR) database using the software that Party A has equipped them with.
3. Enter correct, authentic & complete information of all the Oral Potentially Malignant Disorders & Oral Cancer cases, registered with the institution i.e. party B; which includes all new and on-going treatment, treated cases.
4. Party B will have access to all the data entered by them.
5. Only Party A and Party B will have access to the data and the patients' confidentiality will be maintained.
6. All the data collected in this database will be compiled in a report at the end of the year and party B will get credit for the data entered by them, if and where Party A publishes this data.
7. At the end of the year the institution that provides and maintains maximum data will be recognized at the **Indian Dental Conference**, and be felicitated for the same.

This Collaboration will be in place through this MoU from **25th May 2023**.

Signatures

	Head of the Institution	Hon. Sec. General - IDA
Name	DR. ABY MATHEW.T	Dr. Ashok Dhoble
Signature		
Seal		



കേരളം KERALA

CU 533583

COLLABORATIVE AGREEMENT FOR CONDUCTING Applied Professional Experience (APEX) Posting for Postgraduates of Department of Pediatric and Preventive Dentistry, Pushpagiri College of Dental Sciences.

THIS AGREEMENT is made on the day of (year)

BETWEEN

**St. THOMAS HOSPITAL ,Malakkara,
Pathanamthitta , District**

And

**Department of pediatric and preventive
dentistry Of Pushpagiri College of Dental
Sciences (PCDS), Thiruvalla,
Pathanamthitta, District**

No 1173
12/4/2023 M109

P. KRISHNANKUTTY NAIF
THIRUVALLA VENDOR



Where as

1. As per MDS Pediatric and Preventive Dentistry-MDS (course code 247)the Syllabus of The Kerala University of Health Science(KUHS) the II year postgraduate students have an **Applied Professional Experience(APEX)** posting in Plastic surgery department for 2 week which should provide training in basic principles and their application in cleft lip and palate and other oral maxillofacial anomalies with special emphasis on the role of The pediatric dentist in multidisciplinary cleft lip and palate team
2. ST. Thomas Hospital, Malakkara is a Centre of excellence in Maxillofacial and plastic Surgery under Capt. Dr. Somanathan Nair and Dr. P. C. Mathew and the hospital is working with renowned surgeon Dr. Hermann founder of Cleft Childrens' International in Switzerland.

Considering the above two factor and the proximity of the Centre to PCDS, The Department of pediatric dentistry is proposing a Memorandum of Agreement for APEX posting for the II year postgraduate students of the department in Maxillofacial and plastic Surgery of St. Thomas Hospital, Malakkara

- 3)The proposal is being proposed in response to KUHS Syllabus requirements and initial discussions with St. Thomas Hospital- Malakkara,
- 4)St Thomas Hospital and PCDS are now desirous of collaborating with each other to conduct Applied Professional Experience Posting for a duration of 5 years.

NOW THEREFORE, the parties hereto, for and in consideration of the respective undertakings hereinafter set forth, each of which shall be construed as a covenant as well as condition, THE PARTIES have agreed as follows:

DEFINITIONS

In this Agreement, except insofar as the context or subject matter otherwise indicates or requires, the following terms and expressions shall have the following meanings:

“Agreement” means this Agreement and all Schedules to it.

“Collaboration Tasks” means the R&D work described in Schedule 1 to be conducted by the Party shown therein.

“Commencement Date” means the date first appearing on this Agreement.

“Completion Date”

“Confidential Information” means all information passing from the disclosing Party to the other Party relating to the collaboration program including without limitation (i) financial information, business plans, reports or findings, investigative studies, consultations, methodologies, proposals, systems, programs, course content, techniques, strategies, improvements, discoveries, processes, innovations, inventions, trade secrets, drawings, know how, source and object code, arrangements and agreements with third parties, formulae, concepts not reduced to material form, designs, plans and models whether given orally or in writing (ii) any derivations of any information or data which embodies, contains or describes the Confidential Information and (iii) any other data or information designated by the disclosing Party to be confidential or relating to the current or prospective activities or business of the disclosing Party.

“Intellectual Property” means all rights in relation to inventions (including patents), registered and unregistered trademarks (including service marks), copyright, circuit layouts, registrable designs, registrable plant varieties, processes, know-how and confidential information in the industrial, scientific and artistic fields including application or right to apply for registration of any of those rights.

“Background Intellectual Property” means any Intellectual Property owned by the Parties prior to the commencement of this Agreement and which is made available by a party or Parties to carry out the collaboration program or to achieve the Intended Project Outcomes.

“Incidental Intellectual Property” means all Intellectual Property arising from or out of the Collaboration Program which does not contribute to the Intended Project Outcome.

“Project Intellectual Property” means any Intellectual Property arising from or out of the Collaboration Program and contributing to the Intended Project Outcome.

1. INTENDED PROJECT OUTCOME

a) Developing knowledge in basic principles and their application in cleft lip and palate and other plastic surgery procedures of the head and neck region for postgraduate students of Pediatric and Preventive Dentistry of PCDS

2. COLLABORATION TASKS

PCDS Tasks

Objective 1

Identifying and Developing Schedule for the postgraduate students for APEX posting.

St.THOMAS HOSPITAL Task

Objective .1

Provide facilities and Guidance for the postgraduates students in the basic principles of plastic surgery procedure in head and neck region with emphasis on cleft lip and palate and trauma cases , Hospital will collect sum of Rupees 3000/- Per student for the expense of hospital consumables

Objective 2

Assesment of the attendance and capabilities of the students and provide certificate for the same.

3.CONFIDENTIALITY

3.1 The Parties shall take all reasonable actions to keep confidential all results or information created as part of Collaboration Tasks.

3.2 Each Party shall take all reasonable actions to keep confidential all Confidential Information communicated by the Disclosing Party which information is stated or understood to be confidential at the time of communication.

3.3 The obligations of confidentiality contained in this Agreement shall not apply to any Confidential Information which:

(a) has been made public by the Disclosing Party or by others with the permission of the Disclosing Party;

- (b) is independently received from a third party who is free to disclose it;
- (c) is in the public domain or is a compilation of material in the public domain.

3.4 The following acts shall not be deemed to be a breach of the above provided that all copies of information supplied is marked confidential by both parties and to be used only for the purpose supplied

3.5 Upon termination of this agreement, the Parties agree to return all information received from the Disclosing Party at the request of the Disclosing Party and keep confidential for five(5) years after the termination.

4. PUBLICATION

Publishing of any research work done in this collaborative activity will be joint outcome of both the parties

5. OTHER ACTIVITIES

Subject to the Parties at all times observing their respective duties and obligations under this Contract the existence of this Contract shall not preclude either Party from engaging in any other activities similar to or in competition with those the subject matter of this Contract

6. ADVERTISING

No Party shall use the name of the other Party in any advertising or other promotional material without the written permission of the other Party.

7. WARRANTIES

6.1 Both Parties shall ensure that all services provided to other Party in relation to this Agreement are provided with the due care, diligence and skill reasonably expected of professional persons providing services of the kind described. The Parties makes no other warranty or assurances with respect to the services carried out in relation to this Agreement, or to its quality, accuracy or suitability for any purpose.

6.2 The Parties do not warrant the validity of any Patent or other Intellectual Property rights which may arise from or are connected with this Contract.

8. LIABILITY

8.1 Neither Party shall be liable to the other Party for any loss or damage arising by reason of its failure to perform work on time

8.2 Each Party agrees to indemnify and keep indemnified the other Party against any and all liabilities, losses, costs and expenses incurred by the other Party to the extent that the same are

incurred as a result of the negligence, wilful misconduct, negligent act or omission or willful failure to act on the part of the first mentioned Party.

9. TERM AND TERMINATION

9.1 This Agreement shall commence on the Commencement Date and, subject to earlier termination in accordance with this Agreement, shall continue until the Collaboration Tasks is completed.

9.2 The provisions of Clauses 3,4,5,6,9 & 10 shall survive and be of full effect after expiration or termination of this Agreement.

9.3 This contract may be terminated at any time by mutual written agreement between the Parties.

9.4 If either Party commits a breach of this Agreement then the other Party may request in writing that the breach be remedied. If the Party committing the breach does not remedy it within 30 days then the other Party may terminate this Agreement immediately without further notice.

9.5 Upon termination or expiration of this Agreement all expenses previously paid including equipment purchased in respect of the Collaboration Tasks shall remain the property of respective parties and either party shall make no claim in respect thereof.

10. DISPUTE SETTLEMENT

If there is a dispute between the Parties then:

- (a) the Parties must discuss the dispute initially with a view to settling the dispute amicably;
- (b) if the parties fail to settle the dispute within 14 days of the dispute arising, then the Parties must refer the dispute for mediation to a person appointed by agreement between the parties who has at least two years experience as a mediator;
- (c) the parties must co-operate to the extent necessary to enable the mediator to mediate the dispute within 30 days of his or her appointment;
- (d) the fees of the mediator shall be paid by the Parties in the proportion determined by the mediator;

11. GENERAL

11.1 No Party shall assign all or any of its rights hereunder without the prior written

consent of the other Party.

11.2 No Party shall mortgage, pledge, charge, assign by way of security or otherwise encumber any of its rights hereunder without the prior written consent of the other Party.

11.3 This Agreement shall be read and construed according to the laws for the time being in force in the India

11.4 This Agreement may not be varied except in writing signed by the Parties.

11.5 Should any provision of this Agreement be held by a Court to be unlawful, invalid, and unenforceable or in conflict with any rule, statute, ordinance or regulation, the validity and enforceability of the remaining provisions shall not be thereby affected.

11.6 Any notice under this Agreement shall be served by hand delivery or by being forwarded by Registered post to the address of the Party shown schedule 4 Part II or to such other address as may be notified in writing by the Party from time to time and in the case of service by post shall be deemed to have been received within seven (7) days after posting. Such notices may be served by facsimile provided that confirmation is served by hand or post as described in this clause.

11.7 No servants or agents of any Party shall by virtue of this Agreement be deemed to be employees of the other Party.

11.8 Each Party shall execute such agreements, deeds and documents and do or cause to be executed or done all such acts and things as shall be necessary to give effect to this Agreement.

11.9 In this Agreement except to the extent that the context otherwise requires:

- (a) words denoting the singular include the plural and vice versa;
- (b) words denoting individuals or persons include bodies corporate and trusts and vice versa;
- (c) headings are for convenience only and shall not affect interpretation;
- (d) reference to any document or agreement includes reference to such document or agreement as amended, novated, supplemented, varied or replaced from time to time;
- (e) words denoting any gender include all genders; and
- (f) where any word or phrase is given a defined meaning in this Agreement any part of speech or other grammatical form in respect of such word or phrase has a corresponding meaning.

11.10 This Agreement constitutes the entire agreement between the Parties. Any prior arrangements, agreements, representations or undertakings are hereby superseded.

EXECUTED by the Parties as an Agreement on the date first appearing.

SIGNED for and on behalf of

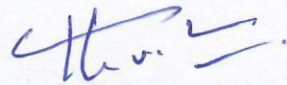
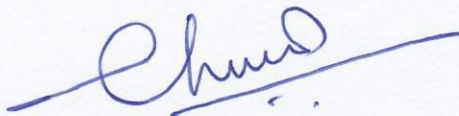
SIGNED for and on behalf of

St. THOMAS HOSPITAL
Malakkara

Pushpagiri
College of Dental Sciences.
Thiruvalla

Signature:

Signature:



Name: Dr. Charlie Cherian

Name: Dr. Aby Mathew T ,

Position: Medical superintendent,
ST. THOMAS HOSPITAL

Position: Principal , Pushpagiri College
of Dental Sciences.

Date:

Date:

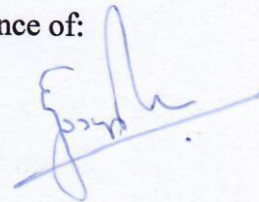
in the presence of:

in the presence of:

Signature:



Signature:



Name:

Name:

DR ELIZABETH JOSEPH

Position:

Position:

Date:

Date:

Part II

Notification Addresses

For St Thomas Hospital

With a copy to

For PCDS

With a copy to:



കേരളം കേരल KERALA

CU 533587

MEMORANDUM OF UNDERSTANDING (MOU)

This agreement is entered into at Thiruvalla on this day

Between

International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN), represented by Dr Sabu Thomas, Director of the **Other Part**.

AND

Pushpagiri College of Dental Sciences (PCDS), Perumthuruthy, Thiruvalla, represented by Dr. Aby Mathew T., Principal of the **One Part**;

Art. 1 Cooperation

The purpose of this agreement is to formally express the mutual wish of IIUCNN and PCDS to develop collaborative teaching, research and exchanges between students, teachers, researchers and staff. This is a legally non-binding agreement which outlines an intention to promote collaboration between the above mentioned institutions. This document would be followed by a Memorandum of Agreement specifying the areas of collaboration and sharing which will have legal binding.

ND 1100
12/4/2017

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P. KRISHNANKUTTY NAIF
THIRUVALLA VENDOR





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Art. 2 Scope of cooperation

Generally speaking and within the limits of financial means of each institution, the cooperation will take the following form:

- Exchange of information in the field of teaching, teaching practice and research;
- Development of scientific research programmes in fields of common interests.
- Development of joint curriculum and methodologies in teaching and research;
- Organising joint conference, methodology workshop, professional development programmes, training programmes etc
- Promotion of exchanges of teachers, researchers, and other members of staff to participate in different teaching, research and professional training activities;
- Invitation of teachers and researchers to participate in seminars, conferences, courses and meetings on research themes of common interest;
- Promotion of exchange programmes for students for a study, training or research period (the modalities will be defined in a specific student exchange agreement) ;
- Co-direction or co-supervision of doctoral theses;
- Joint scientific publications on common interest fields ;
- Any other project of common interest suggested by either of the two parties.

Nothing in this Memorandum is intended to or shall be deemed to establish an exclusive relationship between the parties or to restrict any activities that either party would otherwise be able to undertake. Nothing in this Memorandum is intended to or shall be deemed to establish any partnership or joint venture between the parties or constitute any

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Art. 3 Reference documents

This agreement will be considered as the reference document for any other agreements between the institutions. Complementary agreements concerning any other programme will give information concerning specific programmes and will be agreed upon and applied by the official representatives of the partner institutions. The field of activities covered by this agreement will be determined by the means available in each institution and by the funding obtained.

Art. 4 Validity

The present agreement takes effect as from the date of signature and remains valid for a period of three years. If one party plans to withdraw from the agreement, it must give notice in writing three months in advance, on the understanding that any ongoing actions should be carried through to a successful conclusion.

Art. 5 Force Majeure

Without prejudice to accrued liabilities and rights, no Party shall have any liability whatsoever to the other Party or be deemed to be in default by reason of delay or failure in performance under this Agreement to the extent that such delay or failure is caused by or arises from acts or circumstance or events beyond the reasonable control of that Party, including but not limited to acts of god, acts or regulations of any governmental authority, war or national emergency, accident, fire, riot, strikes, lock-outs, industrial disputes, natural catastrophes or epidemics. Each Party shall bear its own losses arising from such force majeure event(s), if any.

The terms and conditions of this Agreement shall not be disclosed to any third parties without the prior written consent of both Parties.

This agreement shall be governed by the laws of Union of India and State of Kerala

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed in duplicate, at Thiruvalla, Kerala the day and year first above written:

IIUCNN, Kottayam

PCDS, Thiruvalla

Dr. Sabu Thomas

Dr. Aby Mathew T.

Dr. Aby Mathew T. MDS
Principal

Director

Pushpagiri College of Dental Sciences

Place : Kottayam

Place : Thiruvalla

Date :

Date : 22.03.2023

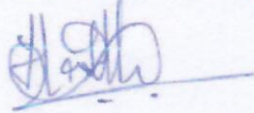
Annexures :

Witnesses

Witnesses

1 Dr. Hanna J Maria

1 Dr. Sunil S



2 Mridula Sreedharan

2 Nedy George Thomas



MEMORANDUM OF UNDERSTANDING (MOU) FOR RESEARCH PARTNERSHIP AND COLLABORATION

This MOU is made and executed at Thiruvalla on this date of January 1st of the year 2020

BETWEEN

Pushpagiri College of Pharmacy, Thiruvalla an accredited (NAAC with grade A) self-financing professional institution established in 2004, affiliated to Kerala University of Health Sciences, for imparting high quality education in pharmaceutical sciences and situated at Medicity Campus, Perumthuruthy, Thiruvalla, 689107 on the one part

AND

Pushpagiri College of Dental Sciences, Thiruvalla an accredited (NAAC grade B) established in 2006 affiliated to Kerala University of Health Sciences for imparting high quality education and clinical training in dental sciences and situated at Medicity Campus, Perumthuruthy, Thiruvalla, 689107 on the one part

Pushpagiri College of Pharmacy, Thiruvalla and Pushpagiri College of Dental Sciences, Thiruvalla has recognized that mutual collaboration, given each other's strengths in research and facilities thereof, will mutually benefit the students and faculties.

Now therefore the parties hereto have agreed to enter into a Memorandum of Understanding (MOU) considering the benefits of sharing the knowledge between the Institutes and establish a vibrant academic collaboration, by undertaking joint activities in their respective fields of research and other activities as given below.

It is mutually agreed by and between the parties as under.

I. Activities

1. Seek mutual advice and support in planning and executing programs promoting excellence in respective areas of research and education;
 2. Encourage the regular / visiting faculty members and scientists of either Institute to visit the other Institute for giving talks in scientific sessions and seminars;
 3. Encourage students / research personnel of either Institute to attend lectures, seminars, workshops and conferences in the respective areas of interest;
- Share the library and scientific literature facilities mutually by giving access to library and other resources of either Institute to the scientists / students / research personnel of other Institute;
4. Encourage the faculty and research / graduate students of Pushpagiri College of Pharmacy, Thiruvalla and Pushpagiri College of Dental Sciences, Thiruvalla to visit the other Institute for short durations for getting research inputs and guidance upon recommendation from the research guides/faculty members of Pushpagiri College of Pharmacy, Thiruvalla and Pushpagiri College of Dental Sciences, Thiruvalla and the Heads of the Institutions;
 6. Encourage joint research activities and projects by the faculty members / scientific personnel of Pushpagiri College of Pharmacy, Thiruvalla and Pushpagiri College of Dental Sciences, Thiruvalla.

II. Fees and Charges

If any charges/ expenses are to be paid by either Institute for the facilities provided by the other Institute, such will be decided by which also may be modified from time to time as per the need.

III. Duration

The MOU is valid for a period of 36 months from the date of signing.

IV. Termination

Either party is free to terminate the agreement by giving a notice of 1 month.

V. Governing Law

The contract shall be governed by the rules and regulations of the institutions and the affiliating bodies

For Pushpagiri College of Pharmacy, Thiruvalla.



1. Dr. Santhosh M Mathews,
Principal
Pushpagiri College of Pharmacy,
Thiruvalla

Principal

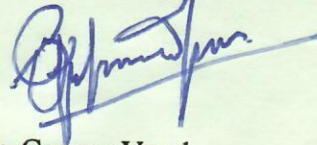
Pushpagiri College of Pharmacy
Medicity Campus, Tiruvalla
Kerala - 689 107, India

(Designation seal)

(College seal)



For Pushpagiri College of Dental Sciences,



2. Dr. George Varghese
Principal,
Pushpagiri College of Dental Sciences,
Thiruvalla

**Dr. K. George Varghese MDS
Principal**

Pushpagiri College of Dental Sciences

(Designation seal)

(College seal)





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MEMORANDUM OF UNDERSTANDING

by and between

Pushpagiri College of Dental Sciences, Pushpagiri Medicity Road, Perumthuruthy.

Thiruvalla, Kerala, India

And

Malabar Dental College And Research Centre, Edappal, Kerala, India

1) PREAMBLE

This Memorandum of Understanding (MOU) is entered into by Pushpagiri College of Dental Sciences, Pushpagiri Medicity Road, Perumthuruthy, Thiruvalla, Kerala, India and between Malabar Dental College And Research Centre, Edappal, Kerala, India are referred to collectively, as "Parties" or individually as "Party"

Page 1 of 5

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Dr. Meenu Merry c. paul. principal Malabar
Dental college & Research centre. Mudhur.

കുറ്റിപ്പുറം സ.ദ.ദ. വേണ്ടർ
ഇ. നാണിത്
എ. നമ്പർ 2/952/2007 (2)



2) PURPOSE:

The Parties recognize the benefits to be desired from increased collaboration, cooperation and interaction for the further promotion and understanding in the field of dental education, research in dentistry, consultancy, scholarships and faculty development through various activities. (here after collectively, referred to as "Field").

The purpose of this MOU is to define the areas of fundamental, academic research in which the parties desire to Work together in the future for their mutual benefit to foster a collaborative framework between Pushpagiri College of Dental Sciences, Pushpagiri Medicity Road, Perumthuruthy, Thiruvalla, Kerala, India and Malabar Dental College, Edappal, Kerala, India in the fields with the view to benefiting from each other's, strengths, initiatives and working procedures and to support collaboration among the researcher's associated with both parties.

3) SCOPE:

This MOU sets forth the intentions of the parties for increased collaborations, cooperation and interaction and doesn't create any legally binding commitments, if the parties later agree to undertake, specific joint projects with legally binding obligations, they will develop separate written agreements for such projects, setting out each party's contributions, deliverables and budgets.

Both parties agree to cooperate, subject to availability of funds and the respective approvals of both the institutions in academic activities and programs, research and consultancy activities and other areas of mutual interest including specifically the following:

- a) Exchange of students Post Graduate students
- b) Exchange of faculty or staff.
- c) Joint research activities and publications.
- d) Participation in seminars and academic activities.
- e) Exchange of academic materials and other information.
- f) Special short term academic programs.
- g) Specific training projects in the area of research and cooperate in clinical training.
- h) Faculty development programs.
- i) Consultations services for curriculum development.
- j) Other areas of interest and collaborations as shall be identified.

The terms of cooperation of each specific activity implemented under this MOU for Cooperation's shall be Mutually discussed and agreed upon in writing by both universities prior to the initiation of that activity. Any such MOUs entered into, as outlined above, will form appendices to this MOU for cooperation.

- **STUDENT EXCHANGE PROGRAM**

- The host College has the right to decide acceptance of exchange students, by taking account of recommendation issued from home College for exchange students based on their academic record.
- Transportation, accommodation, food clothing and other personal costs including the medical health insurance and medical care will be the personal responsibilities of the students themselves. However the host university may charge an amount for providing laboratory, library, internet facilities etc. the amount will be intimated at the time of making an offer.
- The host College shall reserve or make available accommodation on campus for exchange students or assist them in locating suitable housing off campus if they so desire.
- The exchange students will be subject to the student rules at the host College, while on exchange. Exchange students will be offered the same facilities as local students.
- Exchange students will study subjects or conduct researches which are pertinent to their field of study and are offered by the host College.
- Any intellectual property developed during the joint activity will be joint owned by the two Colleges

- **FACULTY EXCHANGE**

The two Colleges will actively seek to promote mutual faculty exchange for mutual agreed periods.

- Faculty exchange may assume various forms, such as individual short-time and long term visit of facilities joint research and development projects.
- Both Colleges will try to seek external funding success to facilitate these exchanges.
- Encouragement of the academic faculty to co-author publications. Joint research activities and joint project possibilities is in subject to applicable copyright and/or other laws of each county, as well as rules and regulations of the respective universities.
- The host Colleges will endeavour to as much as possible, make available such facilities that will enable the faculty to obtain experience and training in its departments and institutes. Including the use of its laboratories and libraries.
- The two Colleges acknowledge that in the absence of an external funding agency, all expenses for travel. Living and allied cost will be left to the discretion and the responsibility of the home College.
- Any intellectual property developed during the joint activity will be jointly owned by the two Colleges.

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4) COSTS:

Each Party will be responsible for its own costs in connection with all matters relating to collaborations under this MOU. Where possible and appropriate the Parties may also seek funding for collaborative activities from other agencies and institutions as appropriate.

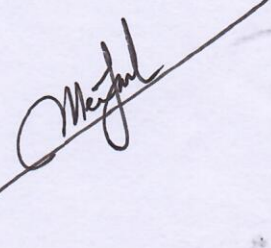
5) INTELLECTUAL PROPERTY AND CONFIDENTIAL INFORMATION:

The treatment of intellectual property rights developed through collaborations under this MOU will be determined between the Parties through mutual consultation and separate written agreements to be entered on a case-by-case basis.

The parties agree that there is no intention to share any confidential or proprietary information in any collaboration under this MOU. If either Party wishes to disclose information that it considers to be confidential or proprietary to the other Party, the Parties will enter into a written, Confidentiality and Non-Disclosure Agreement for each such requirement.

6) TERMS OF UNDERSTANDING:

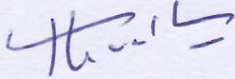
- a) This MOU will remain in force from the date of signature by both parties and shall continue in effect until either of the Parties expresses, in writing, to the other, a desire to terminate. Such termination shall have no effect on any outstanding obligations contractually agreed upon between the parties in an Activity Agreement.
- b) The MOU may be terminated by either Party by giving one year's notice, in writing, to the other Party.
- c) Any Amendment to the MOU will require the written approval of both Parties.
- d) Two signed originals of this MOU will be produced with one to reside with each Party.
- e) In the event that discrepancies arise between this document and any translation of it to a language other than English, this English version shall prevail.

A handwritten signature in black ink, appearing to read 'Meytal', is written over a horizontal line.

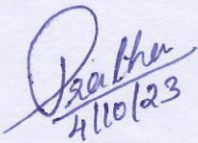
SIGNATURES

The Parties to this Memorandum of Understanding hereby confirm their agreement to the terms contained herein by their signatures below

For, Pushpagiri College of Dental Sciences,
Pushpagiri Medicity Road,
Perumthuruthy
Thiruvalla, Kerala, India

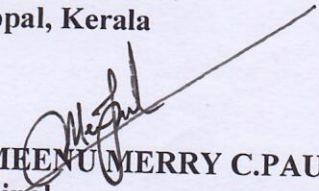
Dr. ABY MATHEW T. 
Principal
Pushpagiri College of Dental Sciences,
Pushpagiri Medicity Road, Perumthuruthy,
Thiruvalla, Kerala, India

Dr. Prabha S.P, Assistant Professor
Department of Biochemistry
PIMS. Thiruvalla

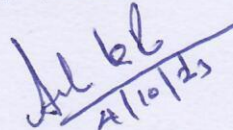

4/10/23

Date :

For, Malabar Dental College And
Research Centre,
Edappal, Kerala


Dr. MEENU MERRY C. PAUL
Principal
Malabar Dental College And Research
Centre,
Edappal, Kerala, India

Dr. Asha K.R. Reader
Department of Biochemistry
Malabar Dental College And
Research Centre,
Edappal, Kerala


4/10/23

Date :

UA Ref: UA183333- 94

14 March 2023

Pushpagiri Centre for Evidence Based Practice (PCEBP): A JBI Centre of Excellence
Tiruvalla
PIMS & RC Tiruvalla
Kerala, India PIN. 689101

Dear Dr Elsheba Mathew

RE: JBI CENTRE OF EXCELLENCE MEMBERSHIP

JBI, an institute of the University of Adelaide (University), is pleased to inform *Pushpagiri Centre for Evidence Based Practice (PCEBP): A JBI Centre of Excellence* (Organisation) that your JBI Centre of Excellence membership as part of the international JBI Collaboration (JBIC) has been approved.

The JBIC is an international network comprising **JBI Centres of Excellence** and **JBI Affiliated Groups** which together strategically promote and support evidence informed approaches to the delivery of healthcare policy and practice in their respective countries and regions.

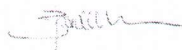
JBI Centres of Excellence have established themselves as a prestigious hub of expertise, through which high quality programs of evidence synthesis, transfer and implementation are achieved. They are recognised by the JBI as an Entity that provides leadership, support, guidance and mentorship to novice groups, and they meet the required competencies and key performance indicators prescribed by the Institute.

To formalise your *JBI Centre of Excellence* membership, please arrange for your Organisation to accept the attached University's Terms and Conditions ("**Agreement**") by countersigning and returning a copy to the address below. Please note that:-

- The existing Affiliated Group or Centre of Excellence Agreement with your Organisation will be discontinued as from the date of execution of this Agreement;
- The initial term of this Agreement will be from 1 January 2022 ("**Effective Start Date**") until 31 March 2025. Subject to review by JBI, this Agreement will automatically renew for a further term of three years unless your Organisation is otherwise notified in writing by JBI at least 30 days prior to expiry/renewal.

Should you have any questions regarding this letter or the University's Terms and Conditions, or if we can assist with anything further, please do not hesitate to contact me at zoe.jordan@adelaide.edu.au.

Yours sincerely



Prof Zoe Jordan
Executive Director
JBI
Faculty of Health and Medical Sciences
The University of Adelaide

JBI CENTRE OF EXCELLENCE TERMS AND CONDITIONS

1. DEFINITIONS

In this *JBI Centre of Excellence* agreement (**this Agreement**):

- 1.1. **Centre** means the *JBI Centre of Excellence* established, or to be established, pursuant to this Agreement.
- 1.2. **Collaborating Organisation** means the Organisation approved for membership as a *JBI Centre of Excellence*, the details of which are specified in the covering letter to these terms and conditions.
- 1.3. **Collaborating Organisation's Materials** means any materials developed by the Collaborating Organisation for the purpose of the Collaborative Activities during the Term of this Agreement and any prior agreement's with the University.
- 1.4. **Collaborative Activities** means those activities described as such in the JBI Collaboration Handbook.
- 1.5. **Committee of Directors** means a committee of the JBIC consisting of the directors of all collaborating organisations and chaired by the Executive Director.
- 1.6. **Completion Date** is the period of 3 years from the Effective Start Date.
- 1.7. **Confidential Information** means all information held by a Party, in any forms or media, including, without limitation, information, research protocols and methodology, processes, techniques, software, computer records, designs, plans, drawings and models, but does not include information:
 - (a) which is publicly available at the date of this Agreement;
 - (b) which subsequently becomes publicly available, other than as a result of breach of this Agreement by the recipient or disclosure by any other person contrary to this agreement.
 - (c) which is already known to the recipient at the date of this Agreement; or
 - (d) which the recipient has acquired or come to know after the date of this Agreement:
 - (i) independently of the disclosing Party or any agent or employee of the disclosing Party; and
 - (ii) otherwise than pursuant to this Agreement.
- 1.8. **Effective Start Date** means 1 January 2022.
- 1.9. **Executive Director** the Executive Director of the JBI.
- 1.10. **Intellectual Property Rights** means patents, trademarks, service marks, registered designs, copyrights, database rights, design rights, trade secrets, know-how, applications for any of the above, and any similar right recognised from time to time in any jurisdiction, together with all rights of action in relation to the infringement of any of the above.
- 1.11. **JBI Logo** means the JBI logo depicted on the first page of this Agreement and registered as Australian trade mark number 915074.
- 1.12. **JBI Materials** means any materials developed by JBI prior to the Effective Start Date of this Agreement or independently of this Agreement and provided to the Collaborating Organisation.
- 1.13. **JBI Short Courses** include the JBI Comprehensive Systematic Review Training Program (**CSRTP**) and the JBI Evidence Implementation Training Program (**EITP**)
- 1.14. **JBI Train the Trainer Handbook** means the Train the Trainer Handbook provided by the University, through JBI, to the Collaborating Organisation for distribution to the Trainer(s), available at <https://wiki.jbi.global/display/JBICI/JBI+Trainer+Handbooks> and as periodically amended by JBI.
- 1.15. **JBI Training Materials** are the training materials and information provided by the University, through JBI, to the Collaborating Organisation for distribution to the Trainer(s), to allow the Trainer(s) to deliver JBI Short Courses.
- 1.16. **JBI Collaboration Handbook** means the JBI Collaboration Handbook available at <https://wiki.jbi.global/pages/viewpage.action?pageId=18055242> and as periodically amended by JBI.
- 1.17. **Participant(s)** include a person who registers to attend a JBI Short Course delivered by the Collaborating Organisation's Trainer(s).
- 1.18. **Term** means the term of this Agreement being from the Effective Start Date until 31 March 2025.
- 1.19. **Trainer(s)** means a person (or persons) employed by the Collaborating Organisation, who having completed the prescribed JBI Short Course Train the Trainer program, as detailed in the JBI Train the Trainer Handbook, is authorised to deliver a JBI Short Course on behalf of the Collaborating Organisation.
- 1.20. **Training Activities** are those activities required to be carried out by the Trainer(s) to deliver a JBI Short Course as detailed in the JBI Train the Trainer Handbook.
- 1.21. **Training Administration Fee** means the \$AUD amount payable to JBI per participant registration in JBI Short Courses delivered by the Collaborating Organisation as determined by JBI and detailed in the JBI Train the Trainer Handbook as varied from time to time.
- 1.22. Unless the context otherwise requires:
 - (a) references to the singular includes the plural and conversely;
 - (b) words importing gender will include all genders;
 - (c) the expression 'person' will include individuals, corporations, partnerships, joint ventures, associations, trusts, agencies or other bodies; and
 - (d) where a word or phrase is given a defined meaning in this Agreement, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
 - (e) words defined in the covering letter to these terms & conditions have the same meaning in these terms and conditions.

2. Term of the Agreement

- 0.1 As from the Effective Start Date, the Collaboration Agreement dated 1 January 2019 between JBI and the Collaborating Organisation is terminated, and the Parties agree to regulate their future JBIC collaborative arrangements on the terms and conditions of this Agreement.
- 2.2 This Agreement commences on the Effective Start Date and, unless terminated earlier in accordance with clause 9, operates for the Term.
- 0.3 The Term may be extended for any period as agreed between the Parties in writing.

3. Confidential Information

JBI Centre of Excellence Agreement v FINAL dated 01.02.2019

JBI CENTRE OF EXCELLENCE TERMS AND CONDITIONS

- 3.1 Each Party will retain all right, title and interest in and to its Confidential Information and disclose to the recipient Party such of its Confidential Information as it considers necessary for the Collaborative Activities.
- 3.2 A disclosing Party must notify the recipient Party of any restrictions or limitations on use of the Confidential Information of which it is aware. A recipient Party may only use the Confidential Information in accordance with those restrictions or limitations.
- 3.3 The recipient of any Confidential Information agrees to keep the Confidential Information secret and confidential and must not, without the prior written approval of the disclosing Party, use, disclose, divulge or deal with any Confidential Information, nor cause, permit or allow any act, matter or thing to be done, omitted or occur which causes any Confidential Information to become known or be used by, or be disclosed or communicated to, any other person, except strictly in accordance with the terms of this Agreement.

4. Obligations of the Collaborating Organisation

- 4.1 The Collaborating Organisation agrees that to qualify as, and to continue to qualify as, a JBI Centre of Excellence member it must at all times:
 - 4.1.1 manage the Collaborative Activities of the Centre in the manner prescribed for such activities in the JBI Collaboration Handbook and this Agreement or as agreed in writing between the Parties;
 - 4.1.2 cover all costs in connection with the establishment and operation of the Centre;
 - 4.1.3 perform all its obligations under this Agreement through the auspices of the Centre, in a form and with content as agreed between the Parties;
 - 4.1.4 participate in periodic reviews of its Collaborative Activities in accordance with the JBI Collaboration Handbook; and
 - 4.1.5 participate in a summative review prior to the Completion Date of this Agreement in the manner detailed in the JBI Collaboration Handbook
- 4.2 The Collaborating Organisation must perform such Core and Elective Key Performance Activities as are sufficient to enable the Collaborating Organisation to meet the standard for continuing membership as a *JBI Centre of Excellence* (as more particularly described in the JBI Collaboration Handbook).
- 4.3 The Collaborating Organisation will appoint a Director of the Centre who will manage the Centre in accordance with, and to such standards specified in, the JBI Collaboration Handbook.
- 4.4 The Collaborating Organisation Director (or proxy) will endeavour to attend the Committee of Directors teleconferences and face to face meetings and JBI/JBIC Colloquia and Conventions in accordance with the manner and procedure set out in the JBI Collaboration Handbook.
- 4.5 The Collaborating Organisation agrees that in the delivery of JBI Short Courses it will:
 - 4.5.1 be liable for all costs in connection with the delivery of the Training Activities by the Trainer(s);
 - 4.5.2 provide JBI with information in relation to the Training Activities undertaken by the Trainer(s) including details of Participants, where the courses/programs were conducted, and which Trainer(s) taught the course;
 - 4.5.3 ensure that Participants who have completed JBI Short Courses subsequently complete the online course evaluations;
 - 4.5.4 ensure that the Trainer(s) deliver only the JBI Training Materials and conduct Training Activities in accordance with the JBI Train the Trainer Handbook;
 - 4.5.5 ensure at all times that the most recent version of JBI Training Materials provided to the Collaborating Organisation by JBI is used to carry out the Training Activities, except where the Collaborating Organisation has obtained express written permission from JBI to use older materials;
- 4.56 ensure that the Trainer(s) conduct at least one JBI Short Course per calendar year, in accordance with the JBI Train the Trainer Handbook; and
- 4.57 ensure that the Trainer(s) successfully complete Trainer reaccreditation activities as required by JBI.

5. Intellectual Property

- 5.1 Each Party retains ownership to Intellectual Property Rights it has created prior to the Effective Start Date or independently of this Agreement and which it has made available for the performance of this Agreement.
- 5.2 The Collaborating Organisation grants the University an irrevocable, exclusive, fee-free licence to use, reproduce and adapt the copyright in the Collaborating Organisation's Materials provided for the Collaborative Activities under this Agreement.
- 5.3 The University grants the Collaborating Organisation a revocable, non-exclusive, fee-free licence to use the copyright in the JBI Materials, for the sole purpose of the Collaborative Activities during the Term.
- 5.4 The University grants the Collaborating Organisation a revocable, non-exclusive licence solely for the Organisation and its Trainer(s) to use the copyright in the JBI Training Materials, for the sole purpose of conducting Training Activities to deliver JBI Short Courses, and for the Participants' subsequent learning purposes, but not for the Participants to gain credits towards tertiary, higher education, post graduate or award courses. The Collaborating Organisation and its Trainer(s) may only use, photocopy or distribute JBI Training Materials for the purpose of providing JBI Training Materials to the Participants. The Collaborating Organisation will respect, and will ensure its Trainer(s) respect, the moral rights of the authors in the JBI Training Materials.
- 5.5 If the Collaborating Organisation wants to incorporate the JBI Training Materials in the programs they deliver for the purpose of Participants gaining credits towards tertiary, higher education, post graduate or award courses, the Collaborating Organisation must enter into good faith negotiations with the University to obtain a licence to the JBI Training Materials for that purpose.
- 5.6 The Collaborating Organisation grants to the University a perpetual, non-exclusive licence for JBI to use, copy and publish information provided to it under clause 4.5.2.
- 5.7 Each Party will, in any publication containing information provided by the other Party, acknowledge the authorship of that information.

6. Publicity and promotion

JBI CENTRE OF EXCELLENCE TERMS AND CONDITIONS

- 6.1 The Collaborating Organisation will use reasonable endeavours to promote JBI within its spheres of influence, including, without limitation, the promotion of subscription to JBI's online resources.
- 6.2 The University grants a non-exclusive, revocable, royalty-free licence, for the Collaborating Organisation to use the JBI name and JBI Logo for the sole purpose of promoting the Collaborative Activities and JBI.
- 6.3 In the event that the University considers that its name or the JBI name or JBI Logo has been used outside the requirements of clause 6.2, the University will cancel this licence with immediate effect, by giving written notice to the Collaborating Organisation.
- 6.4 The University will provide the Collaborating Organisation with sufficient quantities of its promotional material to enable the Collaborating Organisation to promote JBI.
- 6.5 The Collaborating Organisation will be solely responsible for and will ensure that all communications conducted by it, in connection with this Agreement and particularly JBI, will not contain information that is inaccurate or incomplete, false, misleading or deceptive.
- 6.6 If the University reasonably considers that the Collaborating Organisation has breached this clause 6, the University may terminate this Agreement pursuant to clause 9.2.

7. Payment and Funding

- 7.1 The Collaborating Organisation agrees to provide financial and in-kind assistance for base level staffing and infrastructure sufficient to enable:-
 - (a) effective operation of the Collaborative Activities at the Centre; and
 - (b) the Collaborating Organisation to meet, and maintain, the standard for continuing membership as a *JBI Centre of Excellence*.
- 7.2 Any funding received by the Collaborating Organisation from the University pursuant to this Agreement must be used only to fund Collaborative Activities.
- 7.3 In respect to any funding provided by the University under clause 7.2 (above), the Collaborating Organisation must keep and maintain proper accounting records of how the funding is spent and if requested by the University, at any time during or for 7 years after the Term, the Collaborating Organisation will provide copies of such records to the University's employees or advisers.
- 7.4 The Collaborating Organisation will pay the University the Training Administration Fee for any JBI Short Courses delivered, as detailed in the JBI Train the Trainer Handbook.
- 7.5 The Collaborating Organisation must keep and maintain proper accounting records of all payments made to the University under clause 7.4 (above), all Training Activities carried out by the Collaborating Organisation, including revenue generated, and if requested by JBI, at any time during or for 7 years after the Term, the Collaborating Organisation will provide copies of such records to the University.

8. Liability

- 8.1 Each Party will be responsible for the safety of its own property and employees involved in the Collaboration Activities. Personnel of one Party will in no circumstances be considered to be employees of the other Party.
- 8.2 Each Party ('**indemnifying Party**') will indemnify the other Party ('**indemnified Party**') from and against any loss (including reasonable legal costs and expenses) or liability (but specifically excluding any loss of profit and indirect or consequential loss damage or injury) reasonably incurred or suffered by the indemnified Party arising from any claims, demands, actions or proceedings by a third party against the indemnified Party directly arising out of a breach of the terms of this Agreement or the negligent act or omission of the indemnifying Party provided that such indemnity will be reduced proportionately to the extent that any negligent act or omission or breach of the terms of this Agreement of the indemnified Party or its officers, employees and agents contributed to the relevant loss or liability.

9. Termination & Disestablishing a Centre

- 9.1 Either Party may terminate this Agreement by not less than 3 months written notice to the other Party (unless an earlier termination is mutually agreed by the Parties in writing).
- 9.2 If the Collaborating Organisation breaches this Agreement and the University reasonably considers that the breach cannot be remedied, then the University will, by way of notice in writing, terminate this Agreement immediately.
- 9.3 The consequences of the expiry or termination of this Agreement include:
 - (a) the immediate termination of the licence for the Collaborating Organisation and its Trainer(s) to use the JBI Training Materials;
 - (b) the immediate termination of the licence granted to the Collaborating Organisation and its Trainer(s) under clause 6.2;
 - (c) the immediate return of the JBI Training Materials to the University by the Collaborating Organisation; and
 - (d) the immediate cessation of use of all promotional material referring to JBI and JBI Short Courses, including all promotional material that uses the JBI name and/or JBI Logo, by the Organisation and immediate return to the University.
- 9.4 All rights and obligations under Clauses 3, 5, 7, 8, and 10 will survive termination of this Agreement.
- 9.5 Upon termination or expiration of this Agreement, the Parties agree to follow the Centre Disestablishment Process as described in the JBI Collaboration Handbook.

10. Dispute Resolution

- 10.1 The Parties will endeavour to settle any dispute, controversy or claim arising out of, or relating to, this Agreement in good faith.
- 10.2 Any Dispute arising out of or relating to this Agreement or the breach, termination or invalidity of this Agreement will in the first instance be referred to the following representatives of the Parties for them to endeavour to resolve amongst themselves:

The University:

Deputy Vice Chancellor, Research or his/her authorised delegate
Managing Director of the Collaborating Organisation

Collaborating Organisation:

JBI CENTRE OF EXCELLENCE TERMS AND CONDITIONS

10.3 In the event that the Dispute is not resolved within 30 days from the date of referral of the Dispute to the designated persons referred to in clause 10.2 (or within such further period as those representatives may agree is appropriate), the Parties may take such further action as they think fit and reasonable in the circumstances.

11. Severability

Should any provision of this Agreement be held by a court to be invalid, unenforceable or illegal for any reason, such provision will be deemed severed from the Agreement and the validity and enforceability of the remaining provisions will not be affected.

12. Entire Agreement

This Agreement constitutes the entire agreement between the Parties and supersedes all prior representations, agreements, statements and understandings, whether oral or in writing.

13. Assignment

This Agreement is personal to the Parties and neither Party may assign its benefits or obligations under this Agreement unless mutually agreed in writing.

14. General

- 14.1 The Collaborating Organisation must not transfer or encumber its interest in, or subcontract its obligations under, this Agreement without the University's written consent.
- 14.2 The relationship between the Parties is that of independent contractors and not partners, joint venturers or principal and agent.
- 14.3 Nothing in this Agreement prevents the University from entering into any future arrangements with any third party in relation to any matter similar to or in competition with the subject matter of this Agreement.
- 14.4 The Parties intend to sign and deliver this Agreement by electronic transmission. Each Party agrees that the delivery of the Agreement by electronic transmission will have the same force and effect as delivery of original signatures and that each Party may use such electronic signatures as evidence of the execution and delivery of the Agreement by all Parties to the same extent that an original signature could be used.
- 14.5 In the case of any inconsistency between any translation of this Agreement, or any documentation related to this Agreement, in a language other than English and the English version, the English version will prevail.

EXECUTED as an Agreement

SIGNED for and on behalf of the **UNIVERSITY OF ADELAIDE** by an officer duly authorised to sign on its behalf:)

Greg Macpherson

Name: Greg Macpherson
Position: University delegate
Date: 17 March 2022

SIGNED for and on behalf of **COLLABORATING ORGANISATION** by an officer duly authorised to sign on its behalf:)

Rev. Dr. Mathew Mazhancheril

Name: **REV.DR.MATHEW MAZHANCHERIL**
DIRECTOR
Position: **Pushpagiri Institute of Medical Sciences & Research Centre**
Date: **14-03-2022**
Tiruvalla 689 101, Kerala



UA Ref: UA183333- 70

10th April 2019

Pushpagiri Centre for Evidence Based Practice (PCEBP): A Joanna Briggs Institute Affiliated Group
Tiruvalla
PIMS&RCTiruvalla
Kerala, India PIN. 689101

Dear Elsheba Mathew,

RE: JBI AFFILIATED GROUP MEMBERSHIP

The Joanna Briggs Institute (JBI), an institute of the University of Adelaide (**University**), is pleased to inform *Pushpagiri Centre for Evidence Based Practice (PCEBP): A Joanna Briggs Institute Affiliated Group* (**Organisation**) that your *JBI Affiliated Group* membership as part of the international Joanna Briggs Collaboration (**JBC**) has been approved.

The JBC is an international network comprising **JBI Centres of Excellence** and **JBI Affiliated Groups** which together strategically promote and support evidence informed approaches to the delivery of healthcare policy and practice in their respective countries and regions.

JBI Affiliated Groups are committed to promoting and supporting evidence synthesis, transfer and implementation. They are tactical groups of skilled clinicians, academics and scientists with a defined focus who operationalise JBI method and methodology within their jurisdiction

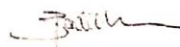
JBI Affiliated Groups are not eligible to receive funding from JBI, however are supported through access to resources and are welcome and encouraged to attend the annual general meeting of the JBC. JBI Affiliated Groups are also eligible to apply to become a JBI Centre of Excellence in accordance with the usual JBI Centre of Excellence application process.

To formalise your *JBI Affiliated Group* membership, please arrange for your Organisation to accept the attached University's Terms and Conditions ("**Agreement**") by countersigning and returning a copy to the address below. Please note that:-

- The initial term of this Agreement will be from 1 January 2019 ("**Effective Start Date**") until 31 March 2024. Subject to review by JBI, this Agreement will automatically renew for a further term of five years unless your Organisation is otherwise notified in writing by JBI at least 30 days prior to expiry/renewal.

Should you have any questions regarding this letter or the University's Terms and Conditions, or if we can assist with anything further, please do not hesitate to contact me at zoe.jordan@adelaide.edu.au.

Yours sincerely



Prof Zoe Jordan
Executive Director
Joanna Briggs Institute
Faculty of Health and Medical Sciences
The University of Adelaide

JBI AFFILIATED GROUP TERMS AND CONDITIONS

1. DEFINITIONS

In this *JBI Affiliated Group* agreement (this Agreement):

- 1.1. **Collaborating Organisation** means the Organisation approved for membership as a *JBI Affiliated Group*, the details of which are specified in the covering letter to these terms and conditions.
- 1.2. **Collaborating Organisation's Materials** means any materials developed by the Collaborating Organisation for the purpose of the Collaborative Activities during the Term of this Agreement and any prior agreement's with the University.
- 1.3. **Collaborative Activities** means those activities described as such in the Joanna Briggs Collaboration Handbook.
- 1.4. **Committee of Directors** means a committee of the JBC consisting of the directors of all collaborating organisations and chaired by the Executive Director.
- 1.5. **Completion Date** is the period of 3 years from the Effective Start Date.
- 1.6. **Confidential Information** means all information held by a Party, in any forms or media, including, without limitation, information, research protocols and methodology, processes, techniques, software, computer records, designs, plans, drawings and models, but does not include information:
 - (a) which is publicly available at the date of this Agreement;
 - (b) which subsequently becomes publicly available, other than as a result of breach of this Agreement by the recipient or disclosure by any other person contrary to this agreement.
 - (c) which is already known to the recipient at the date of this Agreement; or
 - (d) which the recipient has acquired or come to know after the date of this Agreement:
 - (i) independently of the disclosing Party or any agent or employee of the disclosing Party; and
 - (ii) otherwise than pursuant to this Agreement.
- 1.7. **Effective Start Date** means 1 January 2019.
- 1.8. **Executive Director** the Executive Director of the Joanna Briggs Institute.
- 1.9. **Intellectual Property Rights** means patents, trademarks, service marks, registered designs, copyrights, database rights, design rights, trade secrets, know-how, applications for any of the above, and any similar right recognised from time to time in any jurisdiction, together with all rights of action in relation to the infringement of any of the above.
- 1.10. **Group** means the *JBI Affiliated Group* established, or to be established, pursuant to this Agreement.
- 1.11. **JBI Logo** means the JBI logo depicted on the first page of this Agreement and registered as Australian trade mark number 915074.
- 1.12. **JBI Materials** means any materials developed by JBI prior to the Effective Start Date of this Agreement or independently of this Agreement and provided to the Collaborating Organisation.
- 1.13. **JBI Short Courses** include the JBI Comprehensive Systematic Review Training Program (CS RTP) and the JBI Evidence-based Clinical Fellowship Program (EBCFP)
- 1.14. **JBI Train the Trainer Handbook** means the Train the Trainer Handbook provided by the University, through JBI, to the Collaborating Organisation for distribution to the Trainer(s), available at <https://wiki.joannabriggs.org/display/JBCI/Joanna+Briggs+Collaboration+Hub> and as periodically amended by JBI.
- 1.15. **JBI Training Materials** are the training materials and information provided by the University, through JBI, to the Collaborating Organisation for distribution to the Trainer(s), to allow the Trainer(s) to deliver JBI Short Courses.
- 1.16. **Joanna Briggs Collaboration Handbook** means the Joanna Briggs Collaboration Handbook available at <https://wiki.joannabriggs.org/display/JBCI/Joanna+Briggs+Collaboration+Hub> and as periodically amended by JBI.
- 1.17. **Participant(s)** include a person who registers to attend a JBI Short Course delivered by the Collaborating Organisation's Trainer(s).
- 1.18. **Term** means the term of this Agreement being from the Effective Start Date until 31 March 2024.
- 1.19. **Trainer(s)** means a person (or persons) employed by the Collaborating Organisation, who having completed the prescribed JBI Short Course Train the Trainer program, as detailed in the JBI Train the Trainer Handbook, is authorised to deliver a JBI Short Course on behalf of the Collaborating Organisation.
- 1.20. **Training Activities** are those activities required to be carried out by the Trainer(s) to deliver a JBI Short Course as detailed in the JBI Train the Trainer Handbook.
- 1.21. **Training Administration Fee** means the \$AUD amount payable to JBI per participant registration in JBI Short Courses delivered by the Collaborating Organisation as determined by JBI and detailed in the JBI Train the Trainer Handbook as varied from time to time.
- 1.22. Unless the context otherwise requires:
 - (a) references to the singular includes the plural and conversely;
 - (b) words importing gender will include all genders;
 - (c) the expression 'person' will include individuals, corporations, partnerships, joint ventures, associations, trusts, agencies or other bodies; and
 - (d) where a word or phrase is given a defined meaning in this Agreement, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
 - (e) words defined in the covering letter to these terms & conditions have the same meaning in these terms and conditions.

2. Term of the Agreement

- 2.1 This Agreement commences on the Effective Start Date and, unless terminated earlier in accordance with clause 9, operates for the Term.
- 2.2 The Term may be extended for any period as agreed between the Parties in writing.

3. Confidential Information

- 3.1 Each Party will retain all right, title and interest in and to its Confidential Information and disclose to the recipient Party such of its Confidential Information as it considers necessary for the Collaborative Activities.
- 3.2 A disclosing Party must notify the recipient Party of any restrictions or limitations on use of the Confidential Information of which it is aware. A recipient Party may only use the Confidential Information in accordance with those restrictions or limitations.

JBI Affiliated Group Agreement v FINAL dated 01.02.2019

JBI AFFILIATED GROUP TERMS AND CONDITIONS

- 3.3 The recipient of any Confidential Information agrees to keep the Confidential Information secret and confidential and must not, without the prior written approval of the disclosing Party, use, disclose, divulge or deal with any Confidential Information, nor cause, permit or allow any act, matter or thing to be done, omitted or occur which causes any Confidential Information to become known or be used by, or be disclosed or communicated to, any other person, except strictly in accordance with the terms of this Agreement.

4. Obligations of the Collaborating Organisation

- 4.1 The Collaborating Organisation agrees that to qualify as, and to continue to qualify as, a JBI Affiliated Group member it must at all times:
- 4.1.1 manage the Collaborative Activities of the Group in the manner prescribed for such activities in the Joanna Briggs Collaboration Handbook and this Agreement or as agreed in writing between the Parties;
 - 4.1.2 cover all costs in connection with the establishment and operation of the Group ;
 - 4.1.3 perform all its obligations under this Agreement through the auspices of the Group , in a form and with content as agreed between the Parties;
 - 4.1.4 participate in periodic reviews of its Collaborative Activities in accordance with the Joanna Briggs Collaboration Handbook; and
 - 4.1.5 participate in a summative review prior to the Completion Date of this Agreement in the manner detailed in the Joanna Briggs Collaboration Handbook
- 4.2 The Collaborating Organisation must perform such Core and Elective Key Performance Activities as are sufficient to enable the Collaborating Organisation to meet the standard for continuing membership as a *JBI Affiliated Group* (as more particularly described in the Joanna Briggs Collaboration Handbook).
- 4.3 The Collaborating Organisation will appoint a Convenor of the Group who will manage the Group in accordance with, and to such standards specified in, the Joanna Briggs Collaboration Handbook.
- 4.4 The Collaborating Organisation Convenor (or proxy) will endeavour to attend the Committee of Directors teleconferences and face to face meetings and JBI/JBC Colloquia and Conventions in accordance with the manner and procedure set out in the Joanna Briggs Collaboration Handbook.
- 4.5 The Collaborating Organisation agrees that in the delivery of JBI Short Courses it will:
- 4.5.1 be liable for all costs in connection with the delivery of the Training Activities by the Trainer(s);
 - 4.5.2 provide JBI with information in relation to the Training Activities undertaken by the Trainer(s) including details of Participants, where the courses/programs were conducted, and which Trainer(s) taught the course;
 - 4.5.3 ensure that Participants who have completed JBI Short Courses subsequently complete the online course evaluations;
 - 4.5.4 ensure that the Trainer(s) deliver only the JBI Training Materials and conduct Training Activities in accordance with the JBI Train the Trainer Handbook;
 - 4.5.5 ensure at all times that the most recent version of JBI Training Materials provided to the Collaborating Organisation by JBI is used to carry out the Training Activities, except where the Collaborating Organisation has obtained express written permission from JBI to use older materials;
 - 4.5.6 ensure that the Trainer(s) conduct at least one JBI Short Course per calendar year, in accordance with the JBI Train the Trainer Handbook; and
 - 4.5.7 ensure that the Trainer(s) successfully complete Trainer reaccreditation activities as required by JBI.

5. Intellectual Property

- 5.1 Each Party retains ownership to Intellectual Property Rights it has created prior to the Effective Start Date or independently of this Agreement and which it has made available for the performance of this Agreement.
- 5.2 The Collaborating Organisation grants the University an irrevocable, exclusive, fee-free licence to use the copyright in the Collaborating Organisation's Materials provided for the Collaborative Activities under this Agreement.
- 5.3 The University grants the Collaborating Organisation a revocable, non-exclusive, fee-free licence to use the copyright in the JBI Materials, for the sole purpose of the Collaborative Activities during the Term.
- 5.4 The University grants the Collaborating Organisation a revocable, non-exclusive licence solely for the Organisation and its Trainer(s) to use the copyright in the JBI Training Materials, for the sole purpose of conducting Training Activities to deliver JBI Short Courses, and for the Participants' subsequent learning purposes, but not for the Participants to gain credits towards tertiary, higher education, post graduate or award courses. The Collaborating Organisation and its Trainer(s) may only use, photocopy or distribute JBI Training Materials for the purpose of providing JBI Training Materials to the Participants. The Collaborating Organisation will respect, and will ensure its Trainer(s) respect, the moral rights of the authors in the JBI Training Materials.
- 5.5 If the Collaborating Organisation wants to incorporate the JBI Training Materials in the programs they deliver for the purpose of Participants gaining credits towards tertiary, higher education, post graduate or award courses, the Collaborating Organisation must enter into good faith negotiations with the University to obtain a licence to the JBI Training Materials for that purpose.
- 5.6 The Collaborating Organisation grants to the University a perpetual, non-exclusive licence for JBI to use, copy and publish information provided to it under clause 4.5.2.
- 5.7 Each Party will, in any publication containing information provided by the other Party, acknowledge the authorship of that information.

6. Publicity and promotion

- 6.1 The Collaborating Organisation will use reasonable endeavours to promote JBI within its spheres of influence, including, without limitation, the promotion of subscription to JBI's online resources.
- 6.2 The University grants a non-exclusive, revocable, royalty-free licence, for the Collaborating Organisation to use the Joanna Briggs Institute name (including JBI™) and JBI Logo for the sole purpose of promoting the Collaborative Activities and JBI.

JBI Affiliated Group Agreement v FINAL dated 01.02.2019

JBI AFFILIATED GROUP TERMS AND CONDITIONS

- 6.3 In the event that the University considers that its name or the Joanna Briggs Institute name or JBI Logo has been used outside the requirements of clause 6.2, the University will cancel this licence with immediate effect, by giving written notice to the Collaborating Organisation.
- 6.4 The University will provide the Collaborating Organisation with sufficient quantities of its promotional material to enable the Collaborating Organisation to promote JBI.
- 6.5 The Collaborating Organisation will be solely responsible for and will ensure that all communications conducted by it, in connection with this Agreement and particularly JBI, will not contain information that is inaccurate or incomplete, false, misleading or deceptive.
- 6.6 If the University reasonably considers that the Collaborating Organisation has breached this clause 6, the University may terminate this Agreement pursuant to clause 9.2.

7. Payment and Funding

- 7.1 The Collaborating Organisation agrees to provide financial and in-kind assistance for base level staffing and infrastructure sufficient to enable:-
- (a) effective operation of the Collaborative Activities at the Group; and
 - (b) the Collaborating Organisation to meet, and maintain, the standard for continuing membership as a JBI Affiliated Group.
- 7.2 Any funding received by the Collaborating Organisation from the University pursuant to this Agreement must be used only to fund Collaborative Activities.
- 7.3 In respect to any funding provided by the University under clause 7.2 (above), the Collaborating Organisation must keep and maintain proper accounting records of how the funding is spent and if requested by the University, at any time during or for 7 years after the Term, the Collaborating Organisation will provide copies of such records to the University's employees or advisers.
- 7.4 The Collaborating Organisation will pay the University the Training Administration Fee for any JBI Short Courses delivered, as detailed in the JBI Train the Trainer Handbook.
- 7.5 The Collaborating Organisation must keep and maintain proper accounting records of all payments made to the University under clause 7.4 (above), all Training Activities carried out by the Collaborating Organisation, including revenue generated, and if requested by JBI, at any time during or for 7 years after the Term, the Collaborating Organisation will provide copies of such records to the University.

8. Liability

- 8.1 Each Party will be responsible for the safety of its own property and employees involved in the Collaboration Activities. Personnel of one Party will in no circumstances be considered to be employees of the other Party.
- 8.2 Each Party ('**Indemnifying Party**') will indemnify the other Party ('**Indemnified Party**') from and against any loss (including reasonable legal costs and expenses) or liability (but specifically excluding any loss of profit and indirect or consequential loss damage or injury) reasonably incurred or suffered by the indemnified Party arising from any claims, demands, actions or proceedings by a third party against the indemnified Party directly arising out of a breach of the terms of this Agreement or the negligent act or omission of the indemnifying Party provided that such indemnity will be reduced proportionately to the extent that any negligent act or omission or breach of the terms of this Agreement of the indemnified Party or its officers, employees and agents contributed to the relevant loss or liability.

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- 10.2 Any Dispute arising out of or relating to this Agreement or the breach, termination or invalidity of this Agreement will in the first instance be referred to the following representatives of the Parties for them to endeavour to resolve amongst themselves:

The University: Deputy Vice Chancellor, Research or his/her authorised delegate
Collaborating Organisation: Managing Convenor of the Collaborating Organisation

JBI AFFILIATED GROUP TERMS AND CONDITIONS

10.3 In the event that the Dispute is not resolved within 30 days from the date of referral of the Dispute to the designated persons referred to in clause 10.2 (or within such further period as those representatives may agree is appropriate), the Parties may take such further action as they think fit and reasonable in the circumstances.

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EXECUTED as an Agreement

SIGNED for and on behalf of the **UNIVERSITY OF ADELAIDE** by an officer duly authorised to sign on its behalf:

Greg Macpherson
.....

Name: Greg Macpherson
Position: Delegate
Date: 17 April 2019

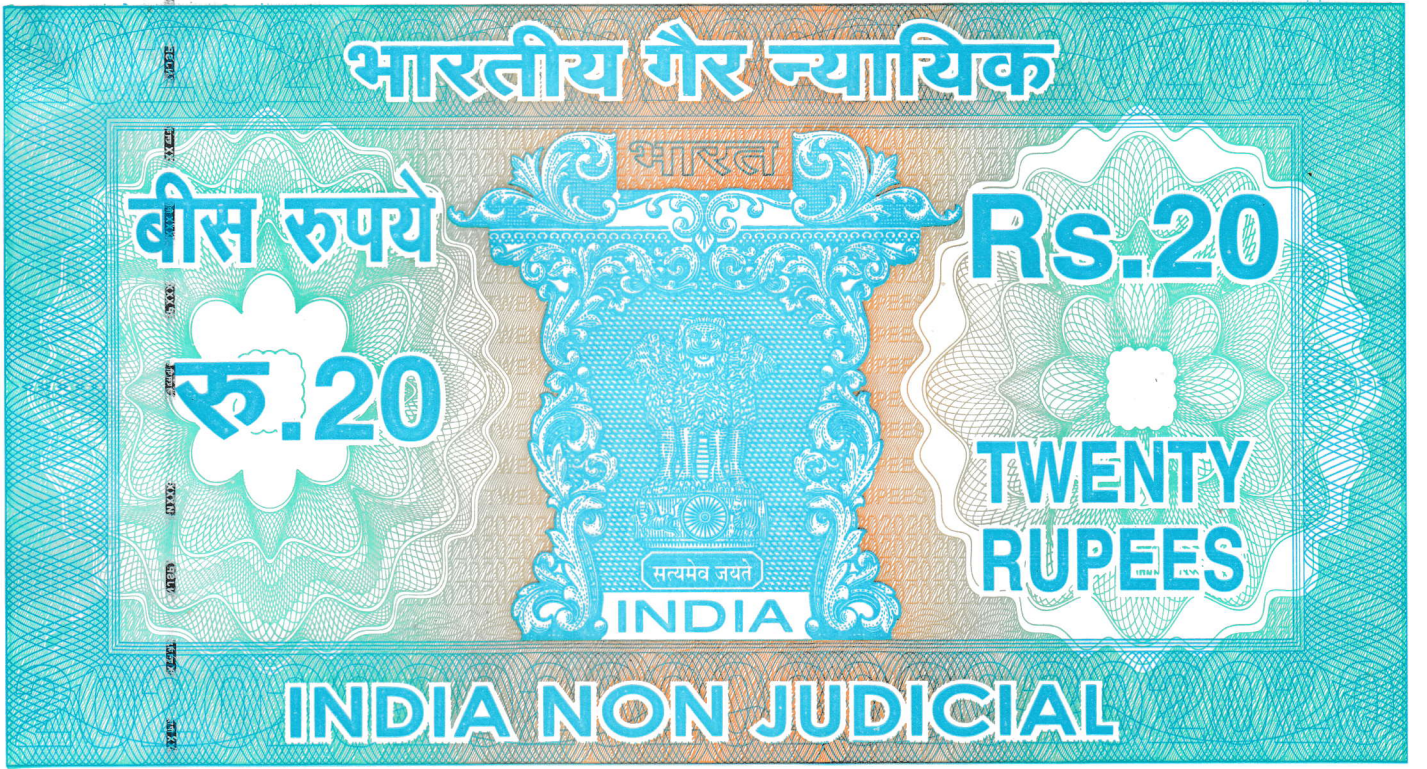
SIGNED for and on behalf of **COLLABORATING ORGANISATION** by an officer duly authorised to sign on its behalf:

Rev. Dr. Mathew Mazhavancheril
.....

Name: **REV.DR.MATHEW MAZHAVANCHERIL**
Position: **DIRECTOR**
Date: **Academics & Research**
Pushpagiri Group of Institutions
Tiruvalla- 689 101, Kerala

12/04/19





தமிழ்நாடு தமிழ்நாடு TAMIL NADU

மெல் :
மலர் :
தேதி :
குபாய் : 20)



ADHIPARASAKTHI
DENTAL COLLEGE AND HOSPITAL
Melmaruvathur - 603 319.
Kanchipuram Dist., Tamil Nadu

எண்: 14887
24-12-2021

99AB 340177

/ R. அனபரசன்
மு.தா. நிற்பனையாளர்
உ.எண்: 5979/E2, 2000
A. நகாளத்தார்
அச்சிடுப்பாக்கம்

MEMORANDUM OF UNDERSTANDING (MOU)

This agreement is entered into at Melmaruvathur on this day 07.01.2022.

Between

Adhiparasakthi Dental College and Hospital, Melmaruvathur, Chengalpattu Dist., Tamilnadu-603 319, Represented by Prof. Dr. S. Karthiga Kannan, Principal of the **One Part**.

AND

Pushpagiri Research Centre, 6th Floor, Mother and Child Block, Pushpagiri Medical College Hospital Campus, Thiruvalla, represented by Rev Dr Mathew Mazhavancheril, Director (Academics and Research) of the **Other Part**.

Art. 1 Cooperation

The purpose of this agreement is to formally express the mutual wish of Adhiparasakthi Dental College and Hospital and Pushpagiri Research Centre to develop collaborative teaching, research and exchanges between students, teachers, researchers and staff. This is a legally non-binding agreement which outlines an intention to promote collaboration between the above mentioned institutions. This document would be followed by a Memorandum of Agreement specifying the areas of collaboration and sharing which will have legal binding.

Art. 2 Scope of cooperation

Generally speaking and within the limits of financial means of each institution, the cooperation will take the following form:

- Exchange of information in the field of teaching, teaching practice and research;
- Development of scientific research programmes in fields of common interests.
- Development of joint curriculum and methodologies in teaching and research;
- Organising joint conference, methodology workshop, professional development programmes, training programmes etc
- Promotion of exchanges of teachers, researchers, and other members of staff to participate in different teaching, research and professional training activities;
- Invitation of teachers and researchers to participate in seminars, conferences, courses and meetings on research themes of common interest;
- Promotion of exchange programmes for students for a study, training or research period (the modalities will be defined in a specific student exchange agreement) ;
- Co-direction or co-supervision of doctoral theses;
- Joint scientific publications on common interest fields ;
- Any other project of common interest suggested by either of the two parties.

Nothing in this Memorandum is intended to or shall be deemed to establish an exclusive relationship between the parties or to restrict any activities that either party would otherwise be able to undertake. Nothing in this Memorandum is intended to or shall be deemed to establish any partnership or joint venture between the parties or constitute any

Art. 3 Reference documents

This agreement will be considered as the reference document for any other agreements between the institutions. Complementary agreements concerning any other programme will give information concerning specific programmes and will be agreed upon and applied by the official representatives of the partner institutions. The field of activities covered by this agreement will be determined by the means available in each institution and by the funding obtained.

Art. 4 Validity

The present agreement takes effect as from the date of signature and remains valid for a period of five years. If one party plans to withdraw from the agreement, it must give notice in writing three months in advance, on the understanding that any ongoing actions should be carried through to a successful conclusion.

Art. 5 Force Majeure

Without prejudice to accrued liabilities and rights, no Party shall have any liability whatsoever to the other Party or be deemed to be in default by reason of delay or failure in performance under this Agreement to the extent that such delay or failure is caused by or arises from acts or circumstance or events beyond the reasonable control of that Party, including but not limited to acts of god, acts or regulations of any governmental authority, war or national emergency, accident, fire, riot, strikes, lock-outs, industrial disputes, natural catastrophes or epidemics. Each Party shall bear its own losses arising from such force majeure event(s), if any.

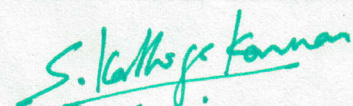
The terms and conditions of this Agreement shall not be disclosed to any third parties without the prior written consent of both Parties.

This agreement shall be governed by the laws of Union of India.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed in duplicate, at Melmaruvathur, Tamilnadu the day and year first above written:

Adhiparasakthi Dental College & Hospital,
Melmaruvathur

Pushpagiri Research Centre, Thiruvalla



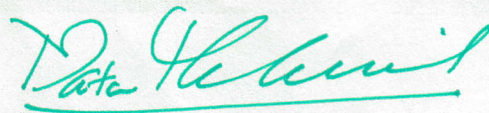
Prof. Dr. S. Karthiga Kannan
PRINCIPAL



Principal

Place : Melmaruvathur

Date : 07.01.2022



Rev Dr Mathew Mazhavancheril

REV.DR.MATHEW MAZHAVANCHERIL
DIRECTOR

Pushpagiri Institute of Medical Sciences &
Research Centre
Director (Academics and
Research) Tiruvalla 689 101, Kerala

Place : Kottayam

Date : 07.01.2022



Witnesses :

Witnesses :

1.



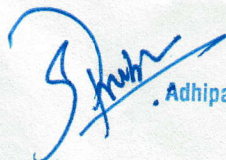
IQAC CO-ORDINATOR



Prof. Dr. V. Sudhakar

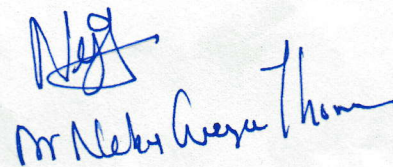
Vice Principal,
Adhiparasakthi Dental College & Hospital
Melmaruvathur.

2.



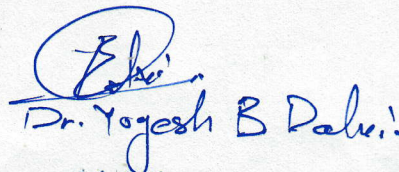
ADMIN MANAGER
Adhiparasakthi Dental College and Hospital
Melmaruvathur - 603 319.

Mr. S. Prabhu
Admin Manager,
Adhiparasakthi Dental College & Hospital
Melmaruvathur.

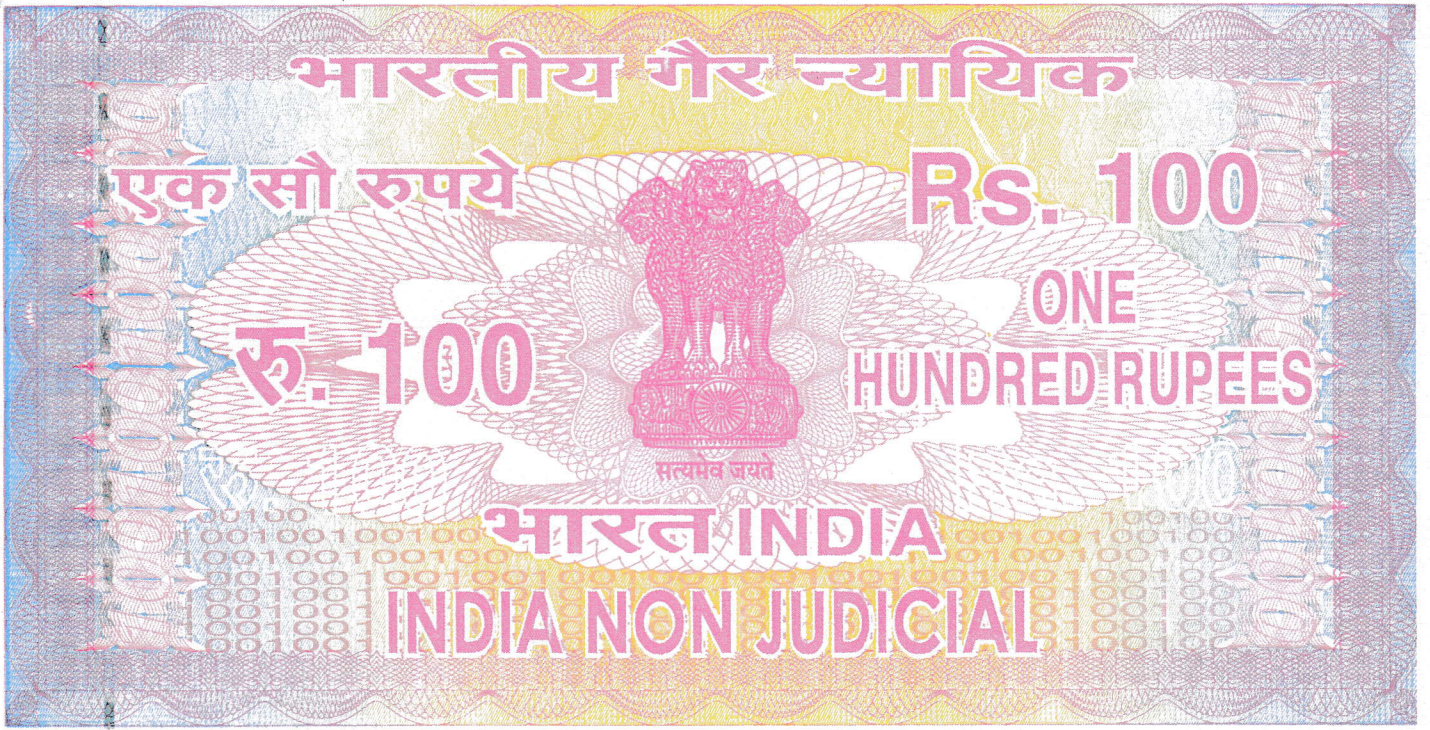


Dr. Nebu George Thomas
Tissue Engineering and Regenerative Medicine Lab
Pushpagiri Institute of Medical Sciences & Research Centre
Thiruvalla, Kerala - 689 101





DR. YOGESH B. DALVI (M.Sc, Ph.D.)
Scientist
Pushpagiri Research Centre
Pushpagiri Institute of Medical Sciences
& Research Centre
Thiruvalla - 689101, Kerala, India.



കേരളം കേരल KERALA

CX 841544

Memorandum of Understanding

This Memorandum of Understanding is made on this 21st day of February 2022.

BETWEEN

ICAR - Central Institute of Fisheries Technology, Matsyapuri P.O., Willingdon Island, Cochin, Kerala, a constituent of the Indian Council of Agricultural Research (ICAR), New Delhi (hereinafter referred to as Institute or ICAR-CIFT), represented by its authorized representative, as the first party

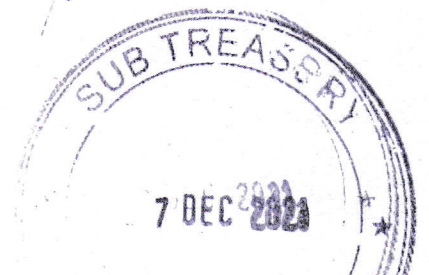
AND

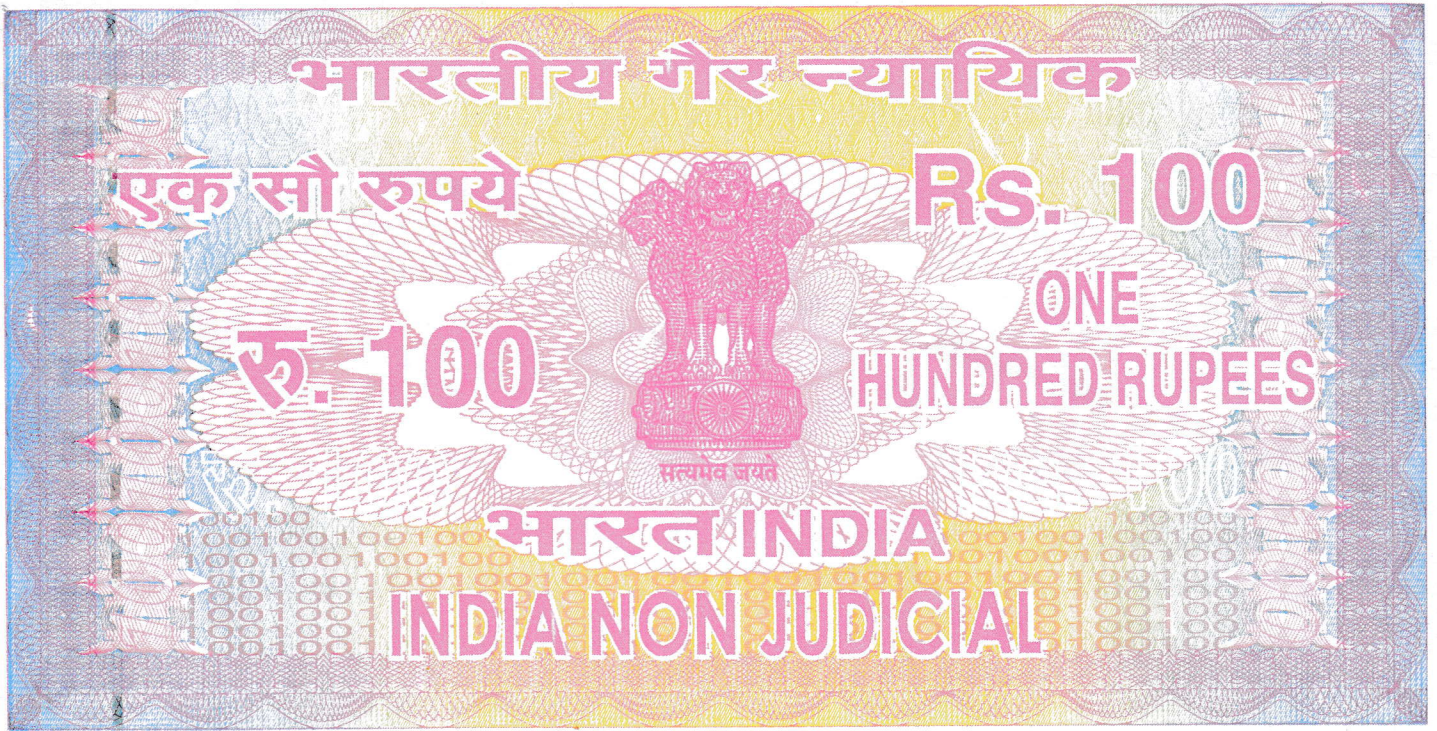
Pushpagiri Institute of Medical Sciences and Research Centre represented in this MoU by Rev. Dr. Mathew Mazhavancheril, Director, Pushpagiri Institute of Medical Sciences and Research Centre as the authorized signatory (hereinafter referred as the PIMS&RC) as the second party.

Mathew Mazhavancheril

No: 30822 Date: 11/2/2022
Value Rs 100/-
Sold To Director CIFT.

V.N. SATHYAN





കേരളം केरल KERALA

CX 841545

2. GENERAL

WHEREAS, ICAR- Central Institute of Fisheries Technology (ICAR-CIFT) is the only technology Institute in India which caters to the entire spectrum of fisheries from harvest to post-harvest operations. The Institute provides technologies and services to the fishing and fish processing industries in the areas of craft and gear, processing including products development, packaging and waste utilization, nutrition, microbiology and biotechnology, engineering, quality assurance and, socio-economics and extension. The Institute is desirous of establishing close linkage with the fishing and fish processing industries that are willing to take-up technology protect the intellectual property rights and willing to incorporate technological changes as may be required from time to time in consultation with the Institute.

WHEREAS, Pushpagiri Institute of Medical Sciences & Research Centre is owned by Thiruvalla Archeparchy of the Syro-Malankara Catholic Church.

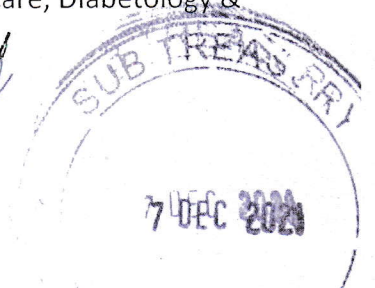
Pushpagiri Institute of Medical Sciences & Research Centre (PIMS&RC) has a multi-disciplinary, ISO 9001:2000 certified, super specialty hospital, is working with the following Departments: General Medicine, Cardiology, Psychiatry, Dermatology, TB & Chest, Gastroenterology, Neuro Medicine, Pediatric Surgery, General Surgery, Orthopedics, Physical Medicine, ENT, Ophthalmology, Pediatric Medicine, Urology, Nephrology, Neuro Surgery, Plastic Surgery, Multi-specialty Dental Clinic, Obstetrics & Gynecology, Radio diagnosis, Anesthesiology, Emergency & Trauma care, Diabetology & Endocrinology.

NO: 30728 Date: 12/12/2020
Value Rs. 100/-
Sold To: [Signature]

Director CIFT

V.N. SATYAN

Cash Court Stamp Vendor



Pushpagiri Research Centre (PRC), was established in the year 2009 and it is a recognized centre for Ph. D. under the Kerala University of Health Sciences (KUHS). The centre is a DSIR (Department of Scientific and Industrial Research) recognized Scientific and Industrial Research Organization (SIRO). Situated in the campus of Pushpagiri Institute of Medical Science and Research Centre, PRC features open-plan, multifunctional research laboratories. Focusing on advanced quantitative approaches to specific biotechnology challenges at the interface of medicine and biology, the PRC offers a unique pluralistic and open research culture that is supposed by world- class infrastructure.

The trait of PRC is its commitment to a social responsibility aimed at enhancing the life of all people, from local communities to international populations, through knowledge transfer and education. The PRC is committed to internationally recognized research programs in medical science with a strong emphasis on translational research, knowledge transfer and discovery through innovation. Using advanced qualitative methods to explore the relationship between the macro behaviour of biological systems and the properties of their nanoscale components, PRC is strongly placed to translate this knowledge towards medical application in a wide range of sectors including drug delivery, drug discovery, diagnosis, treatment and services

WHEREAS, PIMS&RC and ICAR-CIFT have mutual interest in fostering further collaboration among Indian research institutes and agree that there is a need to have MoU under which detailed work plans can be developed and implemented.

NOW THEREFORE, PIMS&RC and ICAR-CIFT, Cochin inspired by their common objectives to further promote and accelerate research in the area of fisheries science and fisheries related technologies have entered into this MoU under the terms and condition set forth in the following articles:


Article-I AREAS OF COLLABORATION

In order to further develop the partnership between PIMS&RC and ICAR-CIFT, by the two parties have agreed in principle to (a) collaborate in research on disciplines related to extraction, characterization and clinical evaluation of biomolecules of aquatic origin (b) undertake collaborative research activities in other areas of mutual interest to both PIMS&RC and ICAR-CIFT and

(c) cooperate in other means for exchanging scientific knowledge and information, such as co- publication of research;

The scale of collaboration between PIMS&RC and ICAR-CIFT will be determined from time to time by joint evaluation of both parties.

It is understood that specific collaborative activities of PIMS&RC and ICAR-CIFT, for implementation under this MoU, will be defined in the work plan developed and approved in accordance with Article II hereof.



Article-II
RESPONSIBILITIES OF EACH PARTY

Within the work plan agreed upon by both parties and subject to available resources and as mutually agreed upon, ICAR-CIFT and PIMS&RC will undertake following activities

ICAR- Central Institute of Fisheries Technology

First Year

Development, characterization and in vitro analysis of demineralized fish bone intended for periodontal regeneration.

Development, characterization and in vitro analysis of acellular dermal matrix functionalized with bioactive marine molecules.

Second Year

Development, characterization and in vitro analysis of collagen-based socket plug intended for socket preservation.

Development, characterization and in vitro analysis of collagen – FSHA composite membrane intended for guided tissue regeneration.

Third year

Development, characterization and in vitro analysis of collagen bio ink for 3d bio printing.

Development, characterization and in vitro analysis of collagen chitosan composite hydrogel loaded with growth factors intended for tissue regeneration.

PIMS&RC

First Year

In vivo analysis of Fish Scale Hydroxyapatite intended for bone regeneration.

In vivo analysis 3d printed FSHA scaffolds

Second Year

In vivo analysis of demineralised fish bone intended for periodontal regeneration

In vivo analysis of acellular dermal matrix intended for dental tissue regeneration

Third Year

In vivo biocompatibility assessment of collagen- membrane loaded with growth factors.

In vivo Biocompatibility assessment of collagen bio ink for 3D bio printing.

In vivo biocompatibility of collagen chitosan composite hydrogel loaded with growth factors intended for tissue regeneration

Ensure that all joint research and/or training activities related to this MoU are properly recorded with ICAR-CIFT; it is also expected that ICAR which has been the focal contact point of ICAR- CIFT is properly notified of the collaborative activities.



FINANCIAL

The expenses with respect to the work components specified for each collaborator shall be borne by the respective collaborator oneself.

Article-III RESEARCH OWNERSHIP AND RESULTS OF COOPERATIVE RESEARCH

Results of collaborative research will be jointly published in the public interest as mutually agreed upon as per ICAR rules & Guidelines. The Principal Investigator from ICAR-CIFT and PIMS&RC shall be given the status of first or second or corresponding author in the publications coming out of the collaboration.

Article-IV RIGHTS AND OBLIGATIONS OF PARTNERS IN PROTECTION OF JOINT IP

The partners shall ensure adequate and effective protection of IP resulting from the project as and where applicable and elaborate the same in the **Joint Intellectual Property Management Plan (JIPMP)**; it may also include the following details:

If mid-course review and modification of JIPMP is considered necessary, a timeline shall be indicated.

Both initial and modified JIPMP documents will be treated as part of the Final Project Document.

It will be obligatory on the part of each partner to notify other partner(s) and their parental organizations (ICAR-CIFT and PIMS&RC) immediately of any result which can be protected as IP and take appropriate action for such protection.


Sharing of IP:

Between partners: The rights of joint encumbered IP arising from the project will be shared equally, or in any other proportion, or otherwise, which will be expressly mentioned in the JIPMP.

Within each partner entity: The respective partner shall be free to determine the sharing of the rights, interests and royalties as well as the liabilities between itself and its employees as per its internal guidelines.

Article-V AMENDMENTS

The parties may, by mutual consent in writing, modify any provisions of this MoU.



Article-VI
EFFECTIVITY

This MoU shall take effect on the date the last authorized representative affixes his/her signature and shall remain valid for two (2) years unless sooner terminated when one of the parties notifies the other in writing of its intention to terminate the MoU, in which case, the MoU will terminate six months from the date of such notification. This MoU may be further renewed or extended upon mutual agreement between the parties, which shall be made not later than six months prior to the termination date.

Article-VII
ASSIGNMENT

This MoU is based on the professional competence and expertise of each 'PARTY' and hence neither PARTY shall transfer or assign this agreement or rights or obligations arising hereunder, either wholly or in part, to any third party.

Article-VIII
COMMERCIAL EXPLOITATION OF IP

While making the commercialization/licensing arrangement on mutual agreement between ICAR-CIFT and PIMS&RC, ICAR-CIFT shall also settle the proportion and terms of sharing the licensing fees and/or royalty and/or other commercial returns with PIMS&RC. ICAR-CIFT shall share the net returns from the commercializing efforts among the scientists/innovators, institutions and ICAR headquarters as per its guidelines.

Article-IX
SHARING OF ACCRUALS ON THE COMMERCIALIZATION OF IP

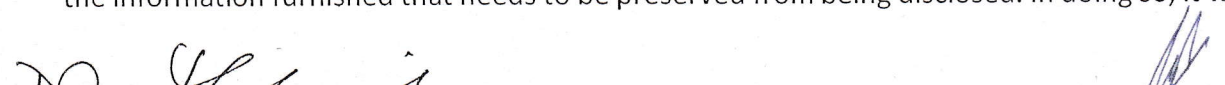
In the event of commercialization of IP by one or more of the partners, the said partner(s) shall share the net revenue earned by them among themselves and also with ICAR-CIFT/PIMS&RC.

The share to ICAR-CIFT/PCMDs will be negotiated before start of the project. The share to be paid to each partner shall be decided by consultation among the partners, which shall be explicitly mentioned in the MoU.

In cases where any one of the parties have provided the financial/other assistance for securing/maintaining the IPR, the expenditure incurred therefore by both parties shall be reimbursed before the sharing of the revenue.

Article-X
CONFIDENTIAL INFORMATION

ICAR-CIFT/PIMS&RC shall identify as soon as possible, or correct in the framework of a project, the information furnished that needs to be preserved from being disclosed. In doing so, it will



be ensured that

The information is not generally known by experts in the field or easily available to them through legal means;

The information has an effective or potential commercial value related to its confidentiality; and

The partners have taken due steps to protect the confidentiality of the information.

The partner receiving, in the framework of a project, information not be disclosed, shall respect the confidentiality of such information.

A Confidentiality Agreement may be separately entered into among the parties for the protection of such confidential information. The MoU itself will also be deemed to be the Confidential Agreement.

Without prior written consent, none of the party(s) shall disclose any confidential information provided by the other party(s) except to

The concerned employees, who shall be bound to keep it confidential and liable for any fault, and

Any concerned legal/regulatory authorities who shall also be similarly bound under the law/regulations.

The (confidential) information, whose disclosure has been authorized for the activities and purposes of the project, shall be used solely within the limits of the project.

Article-XI DISPUTE SETTLEMENT

The foremost effort by parties in case of any IPR/commercialization related dispute arising from the project shall be to resolve it through mutual discussions.

If the parties fail to reach any agreement through mutual discussions, the dispute shall be referred to the Director General, ICAR for settlement.

The Director General, ICAR may appoint an arbitrator to amicably resolve the dispute. In case the suggestions of the arbitrator will not be agreed to by the concerned parties, the Central Technology Management Committee of ICAR will consider and decide the case, which shall be agreeable to/binding upon all parties.

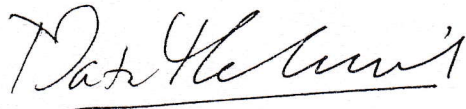
Article-XII NON-EXCLUSIVITY

The relationship of the PARTIES under this understanding shall be non-exclusive and both PARTIES are free to pursue other agreements or collaborations of any kind.

This MoU has been executed in two originals, one of which has been retained by ICAR-CIFT, Cochin and the other by PIMS&RC.

IN WITNESS WHEREOF, the PARTIES have executed this MoU and represent that they approve, accept and agree to the terms contained herein.

For PIMS & RC



Rev. Dr. Mathew Mazhavancheril

Director

Pushpagiri Institute of Medical Sciences and
Research Centre

For ICAR-CIFT



Dr. George Ninan

Head, Engineering Division

Officer-in-Charge, ITMU

Date: 21/2/2022
Seal:



(Dr. Leela Edwin)
Acting Director
ICAR-CIFT, Cochin
(Countersigned)




Date: 21/02/2022
Place: Cochin

Witnesses
For PIMS&RC

Witness Name: Nels George Thomas

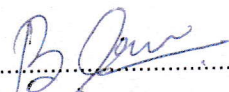
Signature: 

Witness Name: Dr. Joseph Dalry

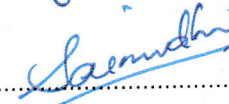
Signature: 

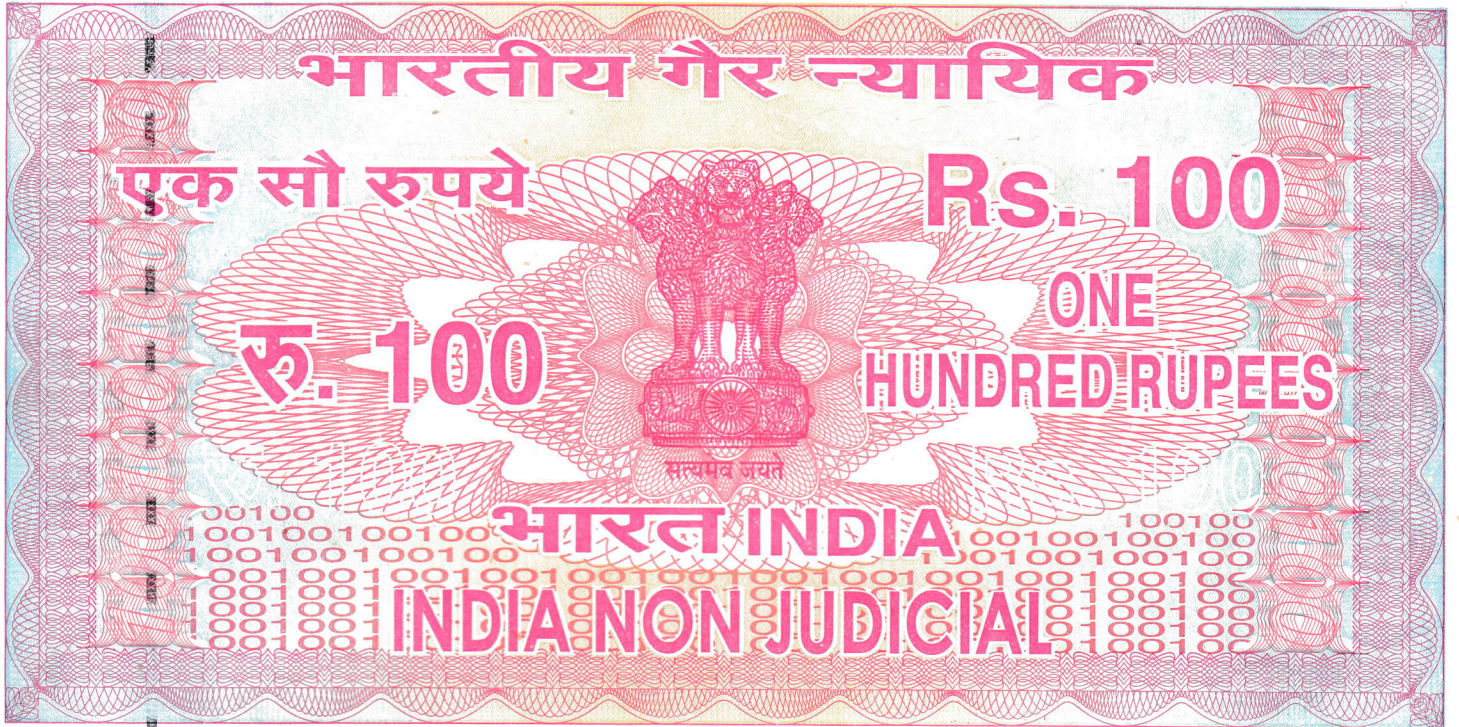
Witnesses
For ICAR-CIFT

Witness Name: Dr. Biju P.K

Signature: 

Witness Name: Zynudheen AA

Signature: 



കേരളം കേരल KERALA

CU 238475

MEMORANDUM OF UNDERSTANDING (MoU)

This agreement is entered into at Thiruvalla on this 1st day of June 2021 ("Effective Date")

Between

Mar Athanasios Collège For Advanced Studies, Thiruvalla, represented by Rev Fr. Dr Cherian J Kottayil, Principal and Director

AND

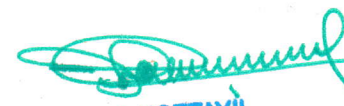
Pushpagiri Research Centre represented by Rev Dr Mathew Mazhavancheril, Director

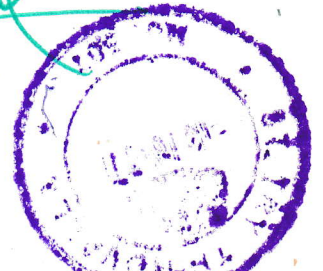
Art. 1 Cooperation

The purpose of this agreement is to formally express the mutual wish of Mar Athanasius College for Advanced Studies (henceforth called MACFAST) and Pushpagiri Research Centre (henceforth called PRC) to develop collaborative teaching, research and exchanges between students, teachers, researchers and staff. This is a **legally non-binding agreement** which outlines an intention to promote collaboration between the above mentioned institutions. This document would be followed by a Memorandum of Agreement specifying the areas of collaboration and sharing which will have legal binding.


REV. DR. MATHEW MAZHAVANCHERIL
DIRECTOR

Pushpagiri Institute of Medical
Sciences & Research Centre
Thiruvalla 689 101, Kerala


FR. DR. CHERIAN J. KOTTAYIL
PRINCIPAL
Mar Athanasios College for Advanced
Studies
Thiruvalla- 689 101 Kerala



No. 32299

26/6/2021

NETTY NAIR

Art. 2 Scope of cooperation

Generally speaking and within the limits of financial means of each institution, the cooperation will take the following form:

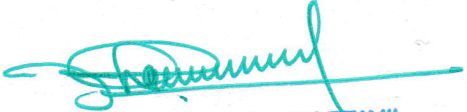
- Development of scientific research programmes in fields of common interests.
- Development of joint curriculum and methodologies in research;
- Organising joint conference, methodology workshop, professional development programmes, training programmes etc.
- Promotion of exchanges of teachers, researchers, and other members of staff to participate in different teaching, research and professional training activities;
- Invitation of teachers and researchers to participate in seminars, conferences, courses and meetings on research themes of common interest;
- Promotion of exchange programmes for students for a study, training or research;
- Co-direction or co-supervision of doctoral theses;
- Joint scientific publications on common interest fields ;
- Posting students for training in laboratory techniques and conduct of major projects
- Any other project of common interest suggested by either of the two parties.

Nothing in this Memorandum is intended to or shall be deemed to establish an exclusive relationship between the parties or to restrict any activities that either party would otherwise be able to undertake. Nothing in this Memorandum is intended to or shall be deemed to establish any partnership or joint venture between the parties or constitute any.

Specific activities to be organized as a part of this Memorandum will include the following:

- Joint workshops on the following themes: cell culture, laboratory animal handling and plant tissue culture etc.
- International conference organized jointly by MACFAST and PRC
- Joint project proposals involving faculties from both institutions to be submitted for funding


REV. DR. MATHEW MAZHAVANCHERIL
DIRECTOR


FR. DR. CHERIAN J. KOTTAYIL
PRINCIPAL
Mar Athanasios College for Advanced

Art. 3 Reference documents

This agreement will be considered as the reference document for any other agreements between the institutions. Complementary agreements concerning any other programme will give information concerning specific programmes and will be agreed upon and applied by the official representatives of the partner institutions. The field of activities covered by this agreement will be determined by the means available in each institution and by the funding obtained.

Art. 4 Validity

The present agreement takes effect as from the date of signature and remains valid for a period of **Five years**. If one party plans to withdraw from the agreement, it must give notice in writing three months in advance, on the understanding that any on-going actions should be carried through to a successful conclusion.

A review meeting to evaluate the progress of the Memorandum will be held every 6 months, alternating between both the institutions. The meeting is the responsibility of the respective coordinators appointed by both the institutions, and should be attended by the Principal of MACFAST and Director of PRC. If there is a consensus in the meeting that the progress of the Memorandum is unsatisfactory, the MoU can be invalidated without the notice period.

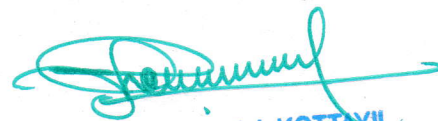
Art. 5 Force Majeure

Without prejudice to accrued liabilities and rights, no Party shall have any liability whatsoever to the other Party or be deemed to be in default by reason of delay or failure in performance under this Agreement to the extent that such delay or failure is caused by or arises from acts or circumstance or events beyond the reasonable control of that Party, including but not limited to acts of god, acts or regulations of any governmental authority, war or national emergency, accident, fire, riot, strikes, lock-outs, industrial disputes, natural catastrophes or epidemics. Each Party shall bear its own losses arising from such force majeure event(s), if any.

The terms and conditions of this Agreement shall not be disclosed to any third parties without the prior written consent of both Parties.



DR. MATTHEW MAZHAVANCHERIL
DIRECTOR
Pushpagiri Institute of Medical
Research Centre



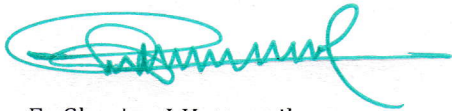
FR. Dr. CHERIAN J. KOTTAYIL
PRINCIPAL
Mar Athanasios College for Advanced
Studies
Tiruvalla- 689 101, Kerala

This agreement shall be governed by the laws of Union of India and State of Kerala

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed in duplicate, at Thiruvalla, Kerala the 1st day of June 2021, first above written:

Mar Athanasios College For Advanced Studies,
Thiruvalla

Pushpagiri Research Centre, Thiruvalla



Rev Fr Cherian J Kottayail



Rev Dr Mathew Mazhavancheril

Director and Principal

Director

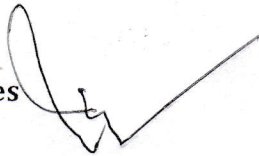
Place : Thiruvalla

Place : Thiruvalla

Date : 1 June 2021

Date : 1 June 2021

Witnesses



1 Prof Varghese Abraham

Administrator, MACFAST

Witnesses



1 Dr Yogesh Dalvi

Scientist Pushpagiri Research Centre

2 Dr Jenny Jacob



HOD, School of Biosciences,

2 Dr Nebu George Thomas

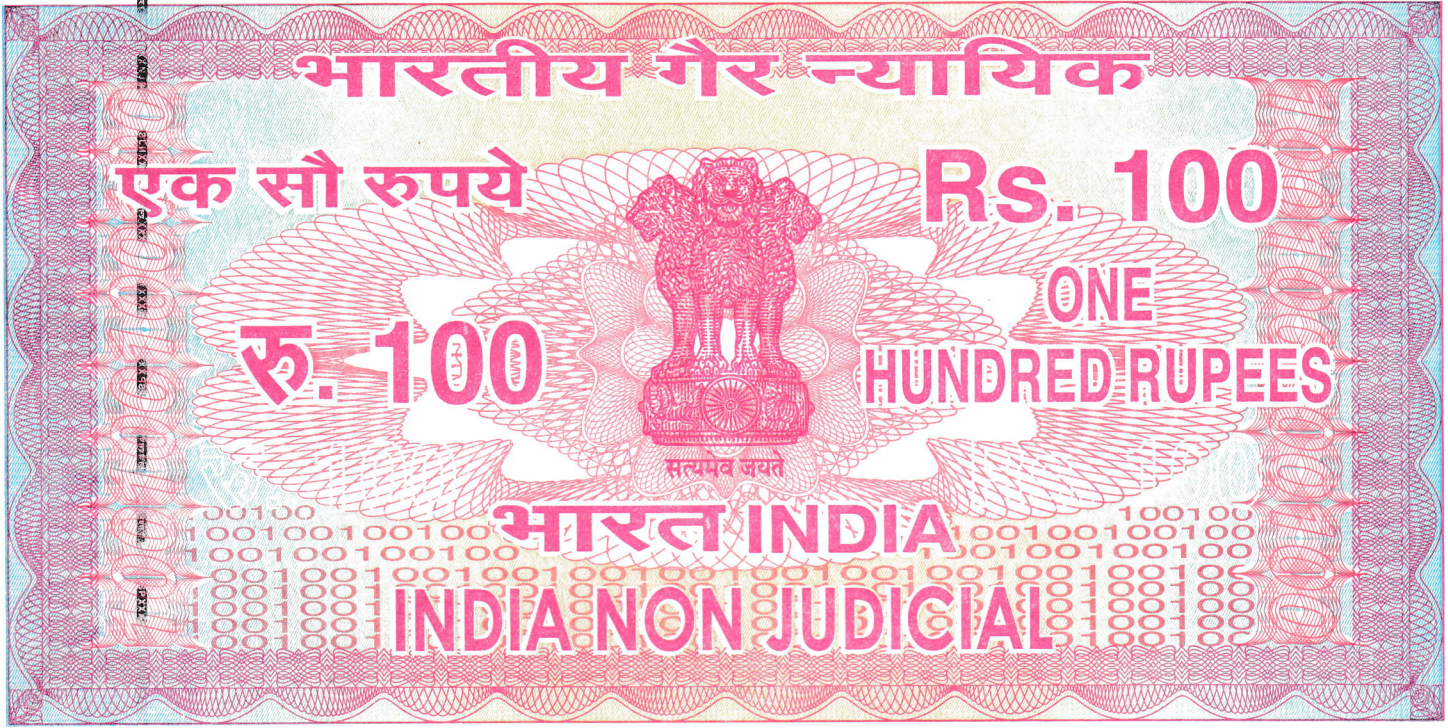


Scientist Pushpagiri Research Centre

FR. Dr. CHERIAN J. KOTTAYIL
PRINCIPAL
Mar Athanasios College for Advanced
Studies
Tiruvalla- 689 101, Kerala

REV. DR. MATHEW MAZHAVANCHERIL
DIRECTOR
Pushpagiri Institute of Medical
Sciences & Research Centre
Thiruvalla 689 101, Kerala





കേരളം കേരल KERALA

DG 020226

MEMORANDUM OF UNDERSTANDING (MOU)

The agreement is entered into Kottayam on 19.01.2022

Between

Mahatma Gandhi University (MGU), Priyadarshini Hills Kottayam, represented by Dr Sabu Thomas, Vice-Chancellor of the **Other Part**.

AND

Pushpagiri Institute of Medical Sciences and Research Centre (PIMS & RC), Pushpagiri Medical College Hospital Campus, Thiruvalla, represented by Rev. Dr Mathew Mazhavancheril, Director (Academics and Research) of the **One Part** ;

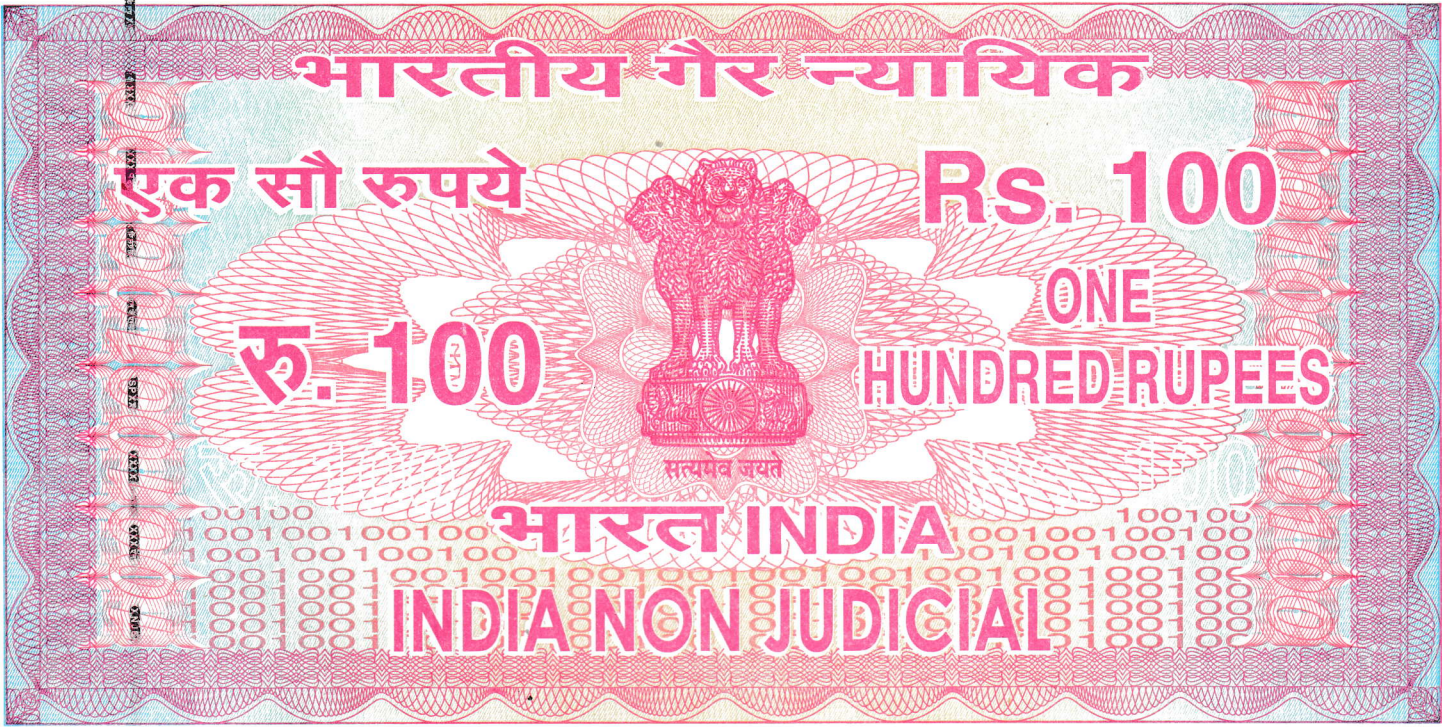
Art. 1 Cooperation

The purpose of this agreement is to formally express the mutual wish of Mahatma Gandhi University and PIMS & RC to develop collaborative teaching, research and exchanges between students, teachers, researchers and staff. This is a legally non-binding agreement that outlines an intention to promote collaboration between the above-mentioned institutions. This document would be followed by a Memorandum of Agreement specifying the areas of collaboration and sharing which will have legal binding.

പി. കുഞ്ചൻകുട്ടി നായർ
വൈസർ
തിരുവല്ല



Handwritten note in the bottom left corner: 'Kslee Nooross 01/12/21'.



കേരളം കേരल KERALA

DG 020228

Art. 2 Scope of cooperation

Generally speaking, and within the limits of financial means of each institution, the cooperation will take the following form:

- Exchange of information in the field of teaching, teaching practice and research;
- Development of scientific research programmes in fields of common interests.
- Development of joint curriculum and methodologies in teaching and research;
- Organising a joint conference, methodology workshop, professional development programmes, training programmes etc
- Promotion of exchanges of teachers, researchers, and other members of staff to participate in different teaching, research and professional training activities;
- Invitation of teachers and researchers to participate in seminars, conferences, courses and meetings on research themes of common interest;
- Promotion of exchange programmes for students for a study, training or research period (the modalities will be defined in a specific student exchange agreement) ;
- Co-direction or co-supervision of doctoral theses;
- Joint scientific publications on common interest fields;
- Any other project of common interest suggested by either of the two parties.

Nothing in this Memorandum is intended to or shall be deemed to establish an exclusive relationship between the parties or to restrict any activities that either party would otherwise be able to undertake. Nothing in this Memorandum is

Ms. K. S.
No. 2457
01/12/24

പി. കുഷ്ണൻകുട്ടി നായർ
വെബർ
തിരുവല്ല

Page 2 of 4



intended to or shall be deemed to establish any partnership or joint venture between the parties or constitute any

Art. 3 Reference documents

This agreement will be considered as the reference document for any other agreements between the institutions. Complementary agreements concerning any other programme will give information concerning specific programmes and will be agreed upon and applied by the official representatives of the partner institutions. The field of activities covered by this agreement will be determined by the means available in each institution and by the funding obtained.

Art. 4 Validity

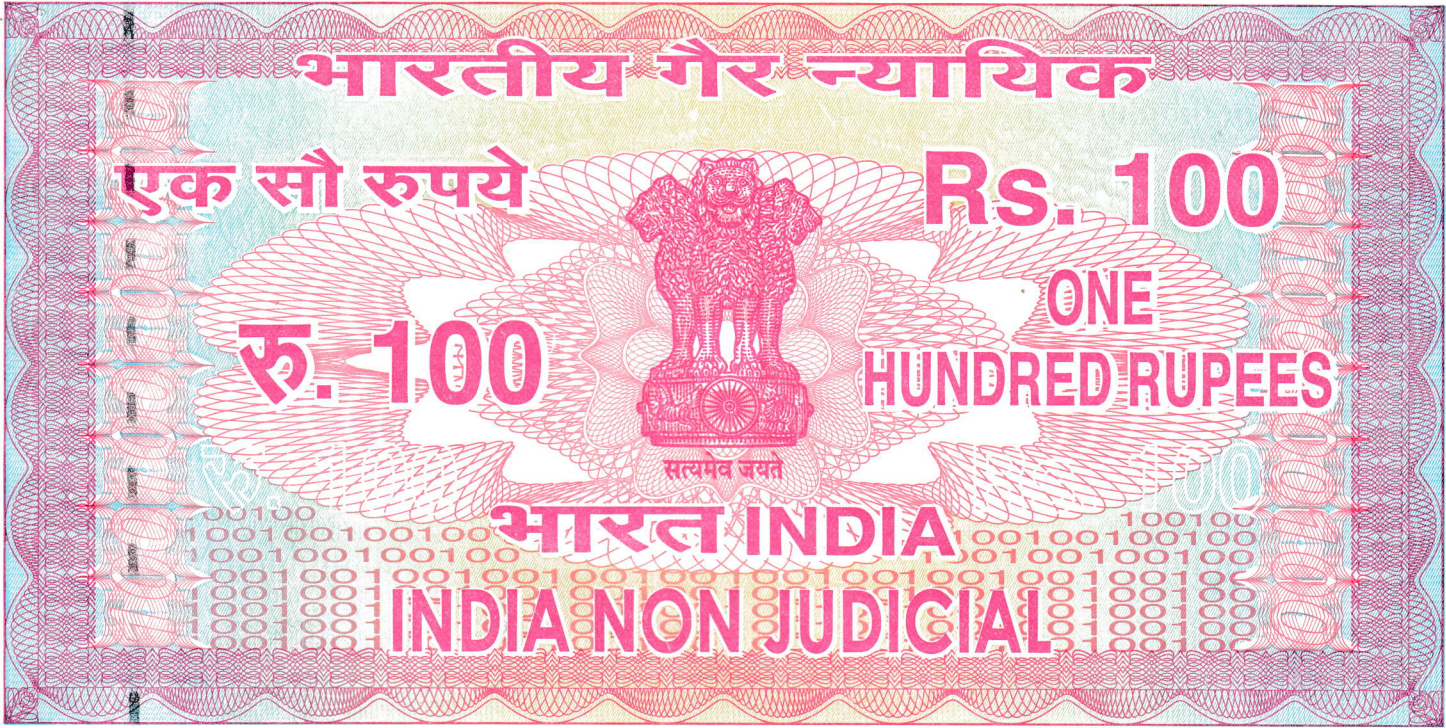
The present agreement takes effect from the date of signature and remains valid for five years. If one party plans to withdraw from the agreement, it must give notice in writing three months in advance, on the understanding that any ongoing actions should be carried through to a successful conclusion.

Art. 5 Force Majeure

Without prejudice to accrued liabilities and rights, no Party shall have any liability whatsoever to the other party or be deemed to be in default because of delay or failure in performance under this Agreement to the extent that such delay or failure is caused by or arises from acts or circumstance or events beyond the reasonable control of that Party, including but not limited to acts of God, acts or regulations of any governmental authority, war or national emergency, accident, fire, riot, strikes, lock-outs, industrial disputes, natural catastrophes or epidemics. Each Party shall bear its losses arising from such force majeure event(s) if any.

The terms and conditions of this Agreement shall not be disclosed to any third parties without the prior written consent of both Parties.

This agreement shall be governed by the laws of the Union of India and the State of Kerala



കേരളം കേരल KERALA

DB 937196

MEMORANDUM OF UNDERSTANDING (MOU)

This agreement is entered into at Thiruvalla on 11/04/2022

Between

St. Gregorios Medical Mission Hospital represented by
Rev. Fr. M. C. Poullose, Chief Executive Officer

AND

Pushpagiri Institute of Medical Sciences and Research Centre, represented by
Rev. Dr. Mathew Mazhavancheril, Director

Art. 1 Cooperation

The purpose of this agreement is to formally express the mutual wish of St. Gregorios Medical Mission Hospital, Parumala and Pushpagiri Institute of Medical Sciences and Research Centre, Thiruvalla to use the services of the Institutional Ethics Committee and Institutional Review Board of the latter, for obtaining ethical sanction for research projects. This is a **legally non-binding agreement** which outlines an intention to promote collaboration between the above-mentioned institutions, in the domain of research. This document and the ethical sanctions accorded through this agreement, will be subject to all relevant laws, rules and conventions of the state & central.

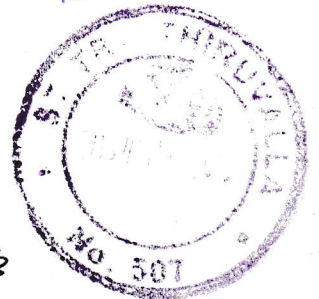
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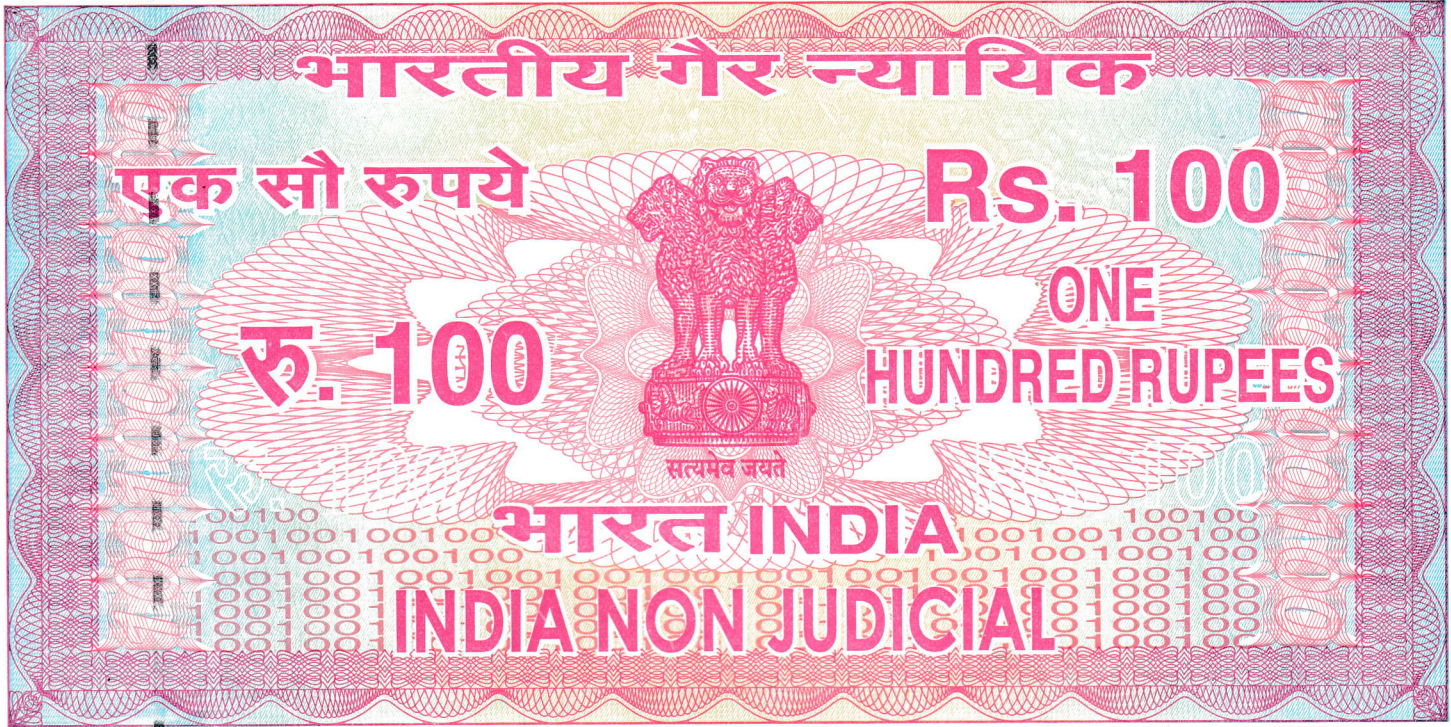
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DB 937197

Art. 2 Scope of cooperation

Generally speaking, and within the limits of financial means of each institution, the cooperation will take the following form:

- Submission of research proposals, along with the required fee, from St Gregorios Medical Mission Hospital to the Institutional Ethics Committee and Institutional Review Board of Pushpagiri Institute of Medical Sciences and Research Centre
- Review of the proposals thus submitted regarding its compliance to reasonable ethical standards for research as determined by international conventions and Indian legal/regulatory system
- Issuance of appropriate permission letters, if the proposal is found to be compliant to reasonable ethical standards for research as determined by international conventions and Indian legal/regulatory system
- Regular intimation regarding the progress of research and the final report of research, to be submitted to the committee which has cleared the proposal
- Full permission and freedom to the members of the Institutional Ethics Committee and Institutional Review Board of Pushpagiri Institute of Medical Sciences and Research Centre to visit St Gregorios Medical Mission Hospital and inspect any document related to the research proposal cleared by the relevant committee.
- Capacity building programmes for residents and faculty of St Gregorios Medical Mission Hospital on research methodology and bioethics.

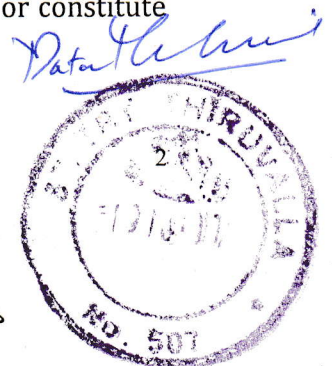
Nothing in this Memorandum is intended to or shall be deemed to establish an exclusive relationship between the parties or to restrict any activities that either party would otherwise be able to undertake. Nothing in this Memorandum is intended to or shall be deemed to establish any partnership or joint venture between the parties or constitute any.

210: 21548
11. 2. 2022

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Art. 3 Reference documents

The Standard Operating Procedure of the Institutional Review Board of Pushpagiri Institute of Medical Sciences & Research Centre, will be the primary reference documents for this association. Pushpagiri Institute of Medical Sciences & Research Centre retains the right to amend the Standard Operating Procedure without intimating the other parties. The field of activities covered by this agreement will be determined by the means available in each institution and by the funding obtained.

Art. 4 Payment of fees

St Gregorios Medical Mission Hospital will pay an **affiliation fee** of Rupees Ten Thousand only, for every three years of this association between the two institutions. The affiliation fee is the co-payment for the processes involved in registering the Institutional Ethics Committee and Institutional Review Board with the Central Drug Standards Control Organization of the Government of India. In addition to this, the researcher submitting the proposal shall pay **submission fee** as intimated by the relevant committee. This fee will be same for all the researchers irrespective of institutional affiliations. Pushpagiri Institute of Medical Sciences & Research Centre retains the right to amend the Standard Operating Procedure without intimating the other parties.

Art. 5 Validity

The present agreement takes effect as from the date of signature and remains valid for a period of **three years**. If one party plans to withdraw from the agreement, it must give notice in writing three months in advance, on the understanding that any ongoing actions should be carried through to a successful conclusion.

Art. 5 Force Majeure

Without prejudice to accrued liabilities and rights, no Party shall have any liability whatsoever to the other Party or be deemed to be in default by reason of delay or failure in performance under this Agreement to the extent that such delay or failure is caused by or arises from acts or circumstance or events beyond the reasonable control of that Party, including but not limited to acts of god, acts or regulations of any governmental authority, war or national emergency, accident, fire, riot, strikes, lock-outs, industrial disputes, natural catastrophes or epidemics. Each Party shall bear its own losses arising from such force majeure event(s), if any.

The terms and conditions of this Agreement shall not be disclosed to any third parties without the prior written consent of both Parties.



This agreement shall be governed by the laws of Union of India and State of Kerala.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed in duplicate, at Thiruvalla on the 11th day of April 2022, first above written:

**St. Gregorios Medical Mission Hospital,
Parumala, Kerala**



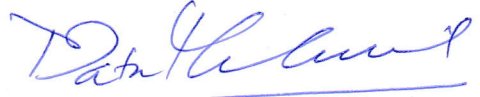
Rev. Fr. M. C. Poullose

Chief Executive Officer

Place : Thiruvalla

Date :

**Pushpagiri Institute of Medical Sciences and
Research Centre, Thiruvalla, Kerala**



Rev. Dr. Mathew Mazhavancheril

**REV.DR.MATHEW MAZHAVANCHERIL
DIRECTOR**

Director (Academics & Research)

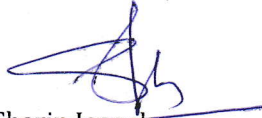
Tiruvalla 689 101, Kerala


Place : Thiruvalla

Date : 18/04/2022



Witnesses

1. Dr. Sherin Joseph 

2. Mr. Jaison V John 

Witnesses

1. Dr Nebu George Thomas 

2. Yogesh Bharat Dalvi 

MEMORANDUM OF UNDERSTANDING

This Memorandum of understanding ("**MOU**") is entered on **25-04- 2022**.

BETWEEN

Saveetha Dental College (SDC), Saveetha Institute of Medical & Technical Sciences (SIMATS), a leading educational institution, having its office at No. 162, Poonamallee High Road, Velapanchavadi, Chennai – 600 077 represented by **Dr. SHEEJA S VARGHESE**, REGISTRAR, SIMATS. Hereinafter referred to as "**SDC**" which expression shall include its executors, successors, administrators and assignees is the "**FIRST PART**."

AND

1. **International and Inter University Centre for Nanoscience and Nanotechnology (IUCNN)**, Mahatma Gandhi University, Kottayam represented by **Prof. (Dr). SABU THOMAS**, Director which expression shall include its executors, successors, administrators and assignees is the "**SECOND PART**".
2. Pushpagiri Research Centre, Thiruvalla, Kerala represented by **REV. Dr. MATHEW MAZHAVANCHERIL** Director which expression shall include its executors, successors, administrators and assignees is the "**SECOND PART**".

2. Terms and Termination

This MOU shall be valid for a period of **3 years** from the Effective Date. Thereafter the parties may mutually agree to extend this MOU in Writing.

Either party may terminate this MOU with thirty (30) days prior written notice to the other party.

Either Party may terminate this MOU upon thirty (30) days prior written notice to the other party for breach of any material provision of this MOU and where there is failure to correct such breach within the said notice period.

3. Other General Terms

It is agreed between the parties that this is an agreement between principal to principal and both parties shall not represent to third parties that they are the agent of the other. Nothing in this MOU shall be concerned to grant either party the right to make commitments of any kind for or on behalf of the other party without prior written consent of the other party.

This MOU contains no representations or warranties and the Parties specifically disclaim any or all warranties, expressed or implied, with regard to this MOU and the subject matter hereof.

4. Confidentially and IPR

All commercial, process product and design information specific to **SDC, SIMATS** shall be kept confidential.

5. Governing Law

This MOU shall be governed and construed in accordance with the laws of Republic of India.

6. Dispute

Disputes, if any, arising out of this MOU will be mutually discussed and settled without any obligation on either party, failing which, the disputes shall be referred to Arbitrator of two Arbitrators, each to be appointed by the parties and a third Arbitrator shall be appointed by the two Arbitrators appointed by the parties, who shall act as "Presiding Arbitrator", The Arbitration proceedings shall be in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and Rules framed there under from time to time. The Place of Arbitrations shall be at Chennai and all the Arbitration proceedings shall be concerned in English Language and governed by the above said Act and Rules and in Indian Laws.

Whereas **SDC, SIMATS** wishes to establish a vibrant Interaction cell with an objective to nurture professionals fully prepared to meet research protocol requirements by the time they complete their degree and are willing to establish an understanding, where Parties shall work together in a number of ways with the objective of nurturing research professionals to meet greater technology challenges.

Scope of the MOU will include but will not be limited to the following:

1. Ebba biolight assisted comparative evaluation of catechin doped bioactive glass nanoparticle (45S5) and chlorhexidine as an antimicrobial agent on oral biofilm from generalized chronic periodontitis patients - an invitro study.
2. Antibacterial efficacy of electron spun polyvinylidene fluoride membrane intended for tissue regeneration.
3. Comparative evaluation of catechin doped bioactive glass nanoparticle (45S5) and calcium hydroxide as an Intra canal medicament on 3-week-old *Enterococcus faecalis* (atcc® 29212™) biofilm. Using ebba biolight, the duration of the Collaborative Research Project is effective from 01-05-2022 to 01-05-2023.

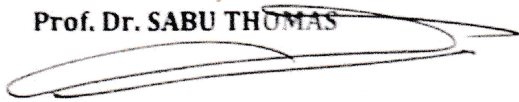
Research Collaborations

SDC, SIMATS, Pushpagiri Research Centre Thiruvalla and International and Interuniversity Centre for Nanoscience MG University, Kottayam Shall Collaborate for Research Projects and Jointly publish Research papers in High impact (SCI) Journals with Sharing Authorship.

Effective Date: In Witness thereof, the parties have caused this MOU to be signed in their respective names as of the date first mentioned above.

Accepted by:

Prof. Dr. SABU THOMAS



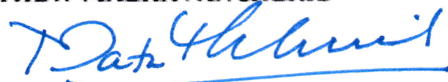
Title: Director

International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN)

Mahatma Gandhi University, Kottayam, Kerala, India



REV. DR. MATHEW MAZHAVANCHERIL



Rev. Dr. Mathew Mazhavancheril
Director & Head
Pushpagiri Research Centre
Tiruvalla - 689 101, Kerala

Title: Director, Pushpagiri Research Centre



Witness:

1. Dr. Nebu George Thomas
2. Dr. Yogesh Bharath Dalvi



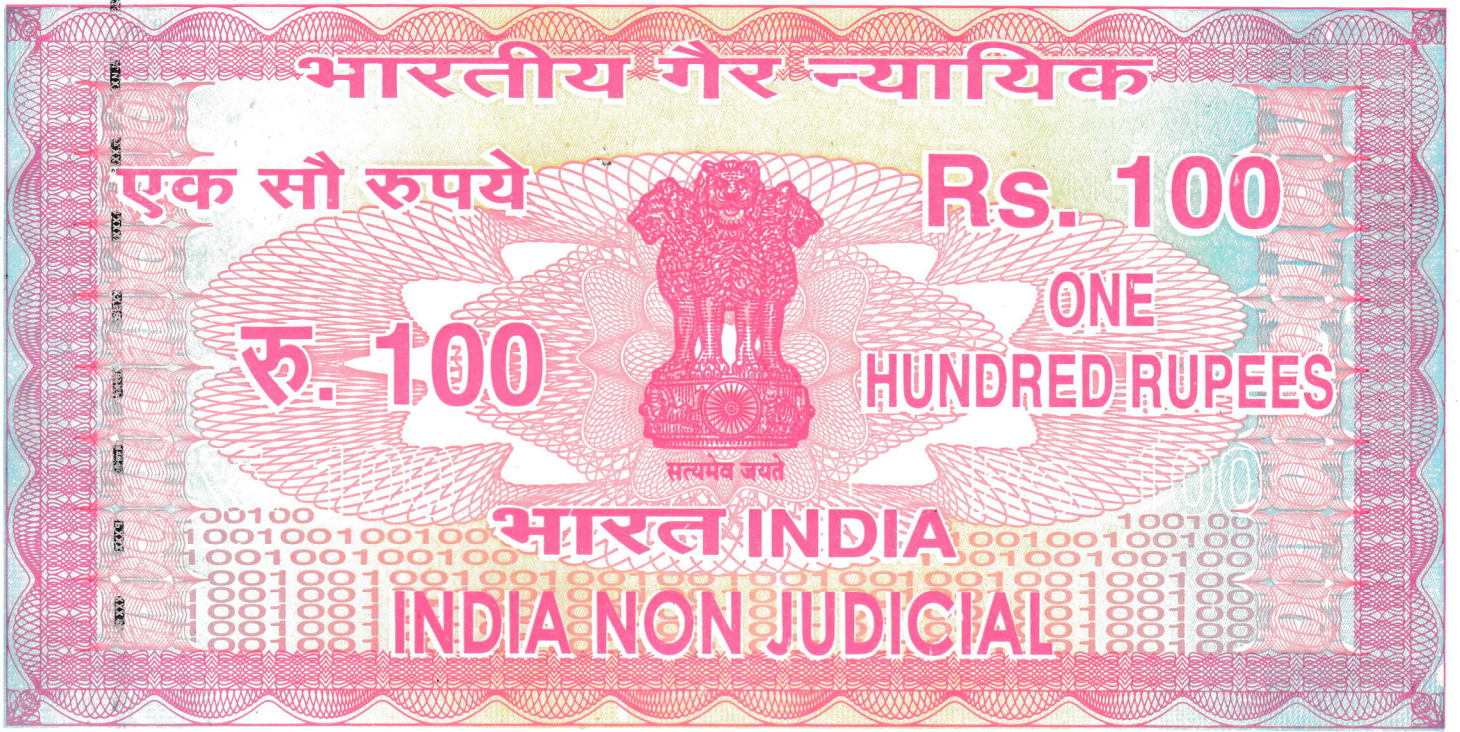
Accepted by:

Dr. SHEEJA. S VARGHESE

Title: REGISTRAR, SIMATS

Witness:

- 1.
- 2.



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MEMORANDUM OF UNDERSTANDING (MOU)

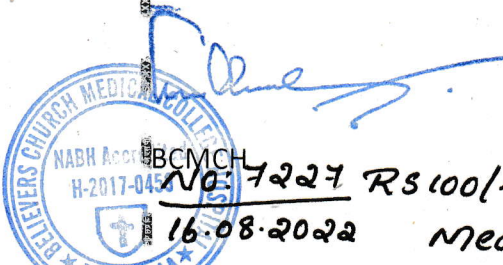
This agreement is entered into at Thiruvalla on this 25th day of August 2022 ("Effective Date")

Between

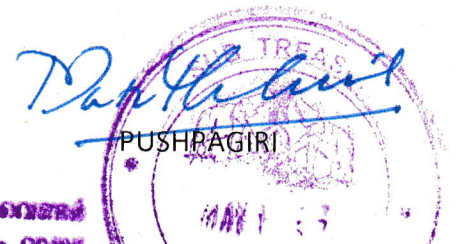
BELIEVERS CHURCH MEDICAL COLLEGE HOSPITAL, St Thomas Nagar, Kuttapuzha P O, Thiruvalla, Kerala 689103, hereinafter referred to as " BCMCH " which expression shall unless repugnant to the context include its successors in interest and permitted assigns) of the First Party represented by its Director & CEO Prof. Dr. George Chandy Matteethra

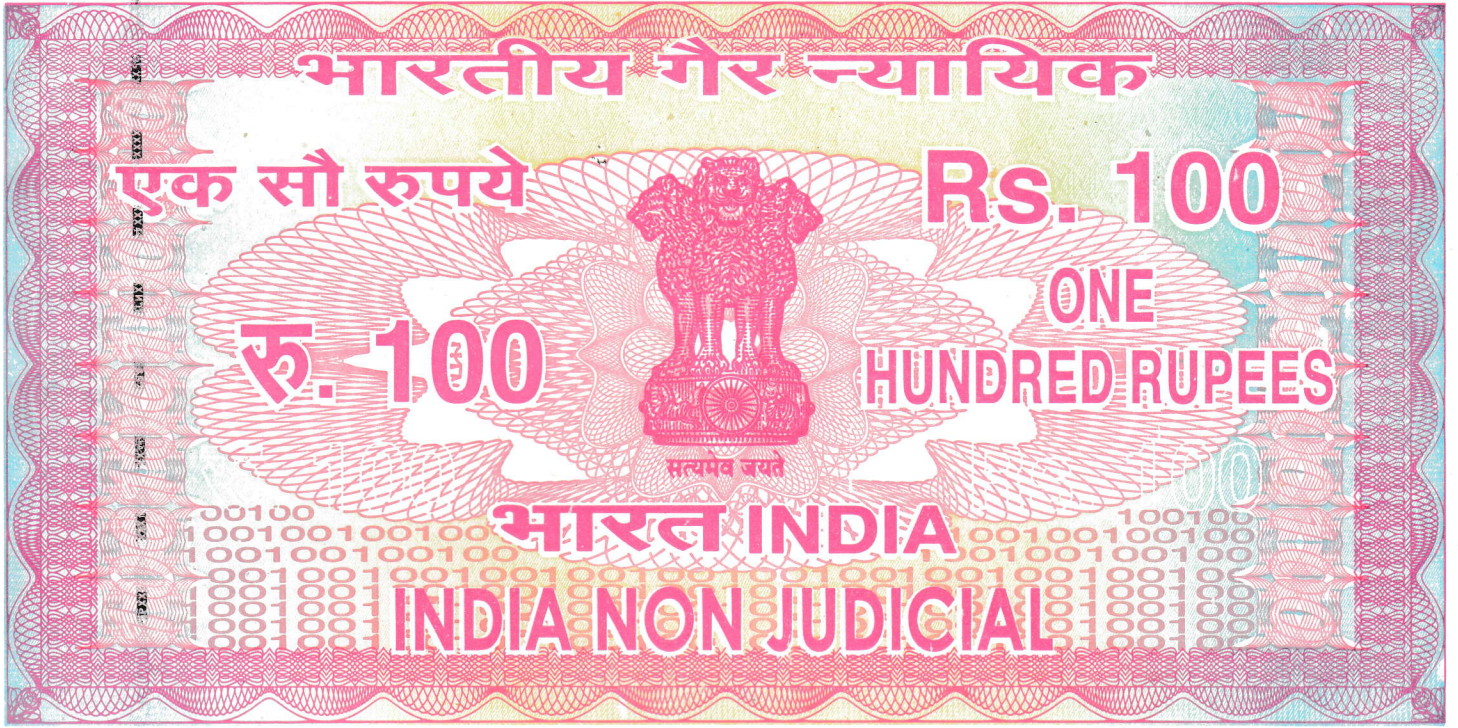
AND

PUSHPAGIRI RESEARCH CENTRE, 6th Floor, Mother and Child Block, Pushpagiri Medical College Hospital Campus, Thiruvalla, Kerala 689101, hereinafter referred to as " PUSHPAGIRI " which expression shall unless repugnant to the context include its successors in interest and permitted assigns) of the Second Party represented by its Director (Research)
Rev. Dr. Mathew Mazhavancheril



BCMCH No: 7227 Rs100/- Believers Church
16-08-2022 Medical College Hospital





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DT 972923

Art. 1 Cooperation

The purpose of this agreement is to formally express the mutual wish of Believers Church Medical College Hospital and Pushpagiri Research Centre to develop collaborative teaching, research and exchanges between students, teachers, researchers and staff. This is a legally non-binding agreement which outlines an intention to promote collaboration between the above mentioned institutions. This document would be followed by a Memorandum of Agreement specifying the areas of collaboration and sharing which will have legal binding.

Art. 2 Scope of cooperation

Generally speaking and within the limits of financial means of each institution, the cooperation will take the following form:

- Exchange of information in the field of teaching, teaching practice and research;
- Development of scientific research programmes in fields of common interests.
- Development of joint curriculum and methodologies in teaching and research;
- Organising joint conference, methodology workshop, professional development programmes, training programmes etc
- Promotion of exchanges of teachers, researchers, and other members of staff to participate in different teaching, research and professional training activities;
- Invitation of teachers and researchers to participate in seminars, conferences, courses and meetings on research themes of common interest;

BCMCH

PUSHPAGIRI



NO: 7228 Rs 100/- Believers Church
16.08.2022 Medical College Hospital
St. Thomas Nagar



- Promotion of exchange programmes for students for a study, training or research period (the modalities will be defined in a specific student exchange agreement) ;
- Co-direction or co-supervision of doctoral theses;
- Joint scientific publications on common interest fields ;
- Any other project of common interest suggested by either of the two parties.

Nothing in this Memorandum is intended to or shall be deemed to establish an exclusive relationship between the parties or to restrict any activities that either party would otherwise be able to undertake. Nothing in this Memorandum is intended to or shall be deemed to establish any partnership or joint venture between the parties or constitute any

Art. 3 Reference documents

This agreement will be considered as the reference document for any other agreements between the institutions. Complementary agreements concerning any other programme will give information concerning specific programmes and will be agreed upon and applied by the official representatives of the partner institutions. The field of activities covered by this agreement will be determined by the means available in each institution and by the funding obtained.

Art. 4 Validity

The present agreement takes effect as from the date of signature and remains valid for a period of three years. If one party plans to withdraw from the agreement, it must give notice in writing three months in advance, on the understanding that any ongoing actions should be carried through to a successful conclusion.

Art. 5 Force Majeure

Without prejudice to accrued liabilities and rights, no Party shall have any liability whatsoever to the other Party or be deemed to be in default by reason of delay or failure in performance under this Agreement to the extent that such delay or failure is caused by or arises from acts or circumstance or events beyond the reasonable control of that Party, including but not limited to acts of god, acts or regulations of any governmental authority, war or national emergency, accident, fire, riot, strikes, lock-outs, industrial disputes, natural catastrophes or epidemics. Each Party shall bear its own losses arising from such force majeure event(s), if any.



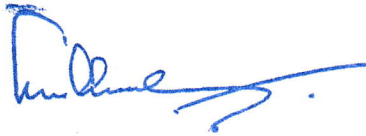
PUSHPAGIRI



The terms and conditions of this Agreement shall not be disclosed to any third parties without the prior written consent of both Parties.

This agreement shall be governed by the laws of Union of India and State of Kerala

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed in duplicate, at Thiruvalla, Kerala the day and year first above written:



PUSHPAGIRI

Rev. Dr. Mathew Mazhavancheril
Director & Head
Pushpagiri Research Centre
Thiruvalla - 689 101, Kerala

Witnesses :



Dr. Rajin Anthon



Dr. Nether George Thomas



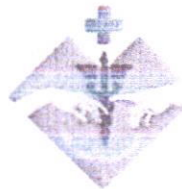
MEMORANDUM OF UNDERSTANDING (MoU)

Between



COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY (CUSAT)
KOCHI – 682022

&



PUSHPAGIRI RESEARCH CENTRE
Thiruvalla- 689101

This MOU is made and executed on this 18th day of December 2019 at _____ by and between

Cochin University of Science and Technology (CUSAT) established by CUSAT Act 1986 is a leading science and technology University in India, which has three campuses: two in Cochin and one in Kuttanad, Alappuzha, and provides university level education in the field of Engineering, Environmental Studies, Humanities, Law, Marine Sciences, Medical Sciences & Technology, Science, Social Sciences and Technology (hereinafter called "CUSAT" which expression shall where the context so admits include its successors and permitted assignees) party of the one part, represented by its Registrar, Dr.K.Ajitha,

AND

Pushpagiri Research Center(PRC) represented in this MoU by , Pushpagiri Groups of Institutions as the authorized signatory hereinafter referred as the PRC as the second party (hereinafter referred to as **PRC**", which expression, unless it be repugnant to the context shall mean and include its successors and assigns) of the other part, represented by its Director, Rev, Dr. Mathew Mazhavancheri.

Pushpagiri Research Centre, was established in the year 2009 and it is a recognized centre for Ph. D. under the Kerala University of Health Sciences (KUHS). The centre is a DSIR (Department of Scientific and Industrial Research) recognized Scientific and Industrial Research Organization (SIRO). Situated in the campus of Pushpagiri Institute of Medical Science and Research Centre, PRC features open-plan, multifunctional research laboratories. Focusing on advanced quantitative approaches to specific biotechnology challenges at the interface of medicine and biology, the PRC offers a unique pluralistic and open research culture that is supported by world-class infrastructure.

Pushpagiri Institute Of Medical Sciences has a multi disciplinary ,ISO 9001:2000 certified, super specialty hospital, is working with the following Departments: General Medicine, Cardiology, Psychiatry, Dermatology, TB & Chest, Gastroenterology, Neuro Medicine, Pediatric Surgery, General Surgery, Orthopedics, Physical Medicine, ENT, Ophthalmology, Pediatric Medicine, Urology, Nephrology, Neuro Surgery, Plastic Surgery, Multi specialty Dental Clinic, Obstetrics & Gynecology, Radio diagnosis, Anesthesiology, Emergency & Trauma care, Diabetology & Endocrinology.

Pushpagiri College of Dental Sciences started in the year 2006 with an annual intake of 50 students in BDS course and also offers PG courses for the Department of Oral and Maxillofacial Surgery, Periodontics, Prosthodontics, Orthodontics and Endodontics

WHEREAS "CUSAT" has been covering all the major engineering, science and humanities disciplines, offering BTech, MSc, MA, MBA, LLB, LLM, MCA, MTech, MFSc, M.Phil and PhD programmes. CUSAT Kochi has world-class infrastructure for carrying out advanced research and has been equipped with a variety of state-of-the-art scientific and engineering instruments. The major thrust of the Department of Biotechnology includes neurobiology, plant biotechnology, nanobiotechnology, computational biology, cancer biology, infectious diseases and proteomics.

AND WHEREAS, both parties have come forward to work together in the area of common interest. Now therefore the parties have decided to sign this MoU to define the scope, roles and responsibilities to implement the project.

1. OBJECTIVE OF THE MOU

In order to promote scientific and cultural co-operation between Pushpagiri Research Center (PRC) and Cochin University of Science and Technology (CUSAT) Kochi, the following general forms of cooperation will be pursued:

- Fostering collaborative research opportunities through academic visits, meetings, lectures, workshops etc.
- Joint research activities, collaborative research projects and publications in areas mutually agreed upon.
- Exchange of scientific materials and information of common interest including data, study reports, books, publications, course information etc.
- Joint training programs for project staff/PhD students pertaining to specific projects undertaken in collaboration.

2. JOINT RESPONSIBILITIES

- To ensure that cooperation as stated under this MoU are accomplished within stipulated time.
- Each Institute shall designate a coordinator to develop and implement specific activities and programs.

RESPONSIBILITIES OF CUSAT

FIRST YEAR

Work I: Development of inherently radiopaque sol – gel bioglass formulations and membranes with superior angiogenesis potential for periodontal bone regeneration

- Design and synthesis and optimization of inherently radiopaque sol – gel bioglass formulations and membranes with superior angiogenesis potential
- Physico-chemical characterizations of the as – synthesized samples such as:
 - Phase purity and crystallinity evaluation by X-Ray diffraction analysis
 - Functional group evaluation by FT-IR spectral analysis
 - Thermal stability studies by Thermogravimetric analysis
 - ICP analysis for finding the elemental composition.
 - Porosity and surface area evaluation by BET analysis
 - Ultrastructural analysis by Transmission electron Microscopy
 - Quantitative Radiopacity evaluation by micro CT Analysis
- Bio-functional evaluation of radiopaque bioglass formulations
 - Determination of Ion dissolution in simulated body fluid by ICP analysis
 - *In vitro* Bio-mineralization assay of radiopaque bioglass formulations in simulated body fluid and evaluation of apatite formation ability SEM/EDAX/ Elemental mapping.
 - Fabrication of electrospun GTR membranes of biodegradable polymers with varying radiopaque sol – gel bioglass content.
- Cell culture and maintenance (MG-63 cell lines)

- Biological evaluations - *In vitro*
 - Cytocompatibility and cell proliferation evaluation by MTT assay
 - Evaluation of nanoparticle uptake by the MG-63 cells
 - Alkaline Phosphatase (ALP) assay: Assessment of osteogenic differentiation by measuring a time course of ALP activity of **MG-63 cells** grown on radiopaque bioglass formulations.
 - Alizarin red staining study to visualize and quantitative estimation mineral (calcium) deposits.

Work II : Development of biomimetic bone-grafts from collagen/chitosan based formulations/scaffolds for orthopedic applications

- Evaluation of degree of purity of collagen membranes obtained from PRC
- Physicochemical characterizations of as-obtained collagen/chitosan membranes/formulation/scaffolds.
- Density and Porosity of the formulations/scaffolds by Water displacement method and liquid intrusion porosimetry analysis.
- *In vitro* bio-degradation study of the as-synthesized formulations/scaffolds in two biologically related media: phosphate buffered solution (PBS) and simulated body fluid (SBF).
- Development of biomimetic bone grafts by biomimetic modulation of collagen/chitosan scaffolds with intrinsic bone regeneration potential
- *In vitro* Bio-mineralization assay of the newly developed biomimetic bone-grafts in simulated body fluid and evaluation of apatite formation potential by SEM/EDAX/ Elemental mapping.

Work III : Development of Antibacterial wound healing patches

- Isolation and purification of natural antibacterial agents from plant sources for with wound healing potential.

SECOND YEAR

Work I

- Isolation of bone marrow mesenchymal stem cells from Sprague dawley rats, cell culture and maintenance.
- Alkaline Phosphatase (ALP) assay: Assessment of osteogenic differentiation by measuring a time course of ALP activity of bone marrow cells grown on radiopaque bioglass formulations.
- Determination of the ability of radiopaque bioglass formulations to stimulate the secretion of angiogenic growth factors from bone marrow mesenchymal stem cells and subsequent angiogenesis by the measurement of vascular endothelial growth factor (VEGF) secretion.

Work II

- Evaluation of transformation of collagen based formulations/scaffolds as orthopedic agents
- Biological evaluations
 - Isolation of bone marrow cells mesenchymal cells from Sprague dawley rats, culture and maintenance.

- *In vitro* biological evaluations using bone marrow mesenchymal stem cells such as Alkaline phosphatase assay, Alizarin red staining, Von kossa staining etc.

Work III

- Antibacterial susceptibility testing by various assays using different bacterial strains such as E. Coli, S. aureus, S. aeruginosa etc.
 - Minimal inhibitory concentration (MIC) test to find out the minimal concentration of an antimicrobial agent required to inhibit the growth of a given bacterial strain.
 - Agar disc diffusion assay to find out the diameter of zone of inhibition.
 - Time kill test to reveal the time-dependent or concentration-dependent antimicrobial effect.
 - Antimicrobial gradient method (E test) to find out the minimal inhibitory concentration.
- *In vitro* biological evaluations of the extracted antibacterial agents from natural plant sources.
 - Cytocompatibility evaluation by MTT assay
 - Nanoparticle uptake study etc.
- *In vitro* Wound healing assays

THIRD YEAR

Work I

- Assisting clinical trials/ Product development activities of inherently radiopaque sol – gel bioglass formulations/membranes with superior angiogenesis potential.

Work II

- Assisting clinical trial/Phase III of Product development activities of collagen based formulations/ scaffolds for orthopedic applications.

Work III

- Assisting clinical trial/Phase III of Product development activities of antibacterial wound healing patches from natural plant sources.

RESPONSIBILITIES OF PRC

FIRST YEAR

Work II

- *In vitro* cell culture studies
 - Cell culture and maintenance
 - Biological evaluations - cytocompatibility evaluation by MTT assay, BrdU assay, cell adhesion evaluation etc.

SECOND YEAR

Work I

- Animal experiments according to standard implantation procedures of animal ethics committee - Creation of defects of 2mm x 6mm diameter on the femur of the Wi star rats followed by implantation of both test as well as control samples into the defect site and subsequent physical observation of the animals during the particular time period of implantation by micro CT evaluation.
- Biochemical analysis for the evaluation of serum and blood parameters.
- Molecular evaluations – Identification of biomarkers and gene expression studies
- Periodical sacrifice of the animals and retrieval of the implants
- Biofunctional evaluations –
 - (a) Histopathological evaluation by H&E staining
 - (b) New bone bone formation V-P staining
 - (c) Mason trichrome staining assay
 - (b) Immunohistochemistry analysis.

Work II

- Purification of collagen membranes
- *In vitro* analysis of the collagen membranes
- *In vitro* biofunctional analysis of biomimetically modulated collagen membranes

- Animal experiments according to standard implantation procedures of animal ethics committee - Creation of defects of 2mm x 6mm diameter on the femur of

the Wi star rats followed by implantation of both test as well as control samples into the defect site and subsequent physical observation of the animals during the particular time period of implantation by micro CT evaluation.

- Biochemical analysis for the evaluation of serum and blood parameters.
- Molecular evaluations -- Identification of biomarkers and gene expression studies
- Periodical sacrifice of the animals and retrieval of the implants
- Biofunctional evaluations –
 - (a) Histopathological evaluation by H&E staining
 - (b) New bone bone formation V-P staining
 - (c) Mason trichrome staining assay
 - (b) Immunohistochemistry analysis.

Work III

- Animal studies according to standard excision wound model procedures of animal ethics committee – Using toothed forceps and pointed scissors circular excision wound of 300 - 400 mm² and 2 mm depth will be made by cutting outer layer of skin from the shaven area. In the control group, the wound would be left open, whereas, the developed wound healing patches will be applied topically on excised wound. Percentage reduction in wound area with respect to initial wound area will be calculated during several time periods.
- Evaluation of biochemical parameters such as hydroxoprolin, collagen and hexosamine etc.
- Histopathological evaluation by haematoxylin and eosin staining.

THIRD YEAR

Work I

- Clinical evaluation of inherently radiopaque sol – gel bioglass formulations/membranes with superior angiogenesis potential.

Work II

- Clinical evaluation of biomimetic bone-grafts from chitosan and collagen based formulations/ scaffolds for orthopedic applications.

Work III

- Clinical evaluation of antibacterial patches for wound healing applications.

3. FINANCIAL ASPECTS

Research student/Project staff exchange: Unless otherwise agreed upon in writing for some particular case, travelling expenses will be borne by the visitor's own institute/university as per their rules.

Faculty exchange: Unless otherwise agreed upon in writing for some particular case, expenses like traveling, stay, food etc. will be borne by the visitor's own institute/university as per their rules.

4. CONFIDENTIALITY AND NON-DISCLOSURE

Any software/hardware material, product specifications, designs, financial, technical information, documents etc. shall be deemed to be in private domain and it shall not be made public or shared with any other party without the prior written consent of the party which owns it.

5. INTELLECTUAL PROPERTY RIGHTS SHARING

- 5.1 Pre-existing IP shall be owned by respective owner.
- 5.2 All existing IP of PRC shall be owned by PRC and existing IP of CUSAT shall be owned by CUSAT.
- 5.3 For new IP generation, a separate agreement shall be initiated with mutual consent by both the parties, for each project/program.
- 5.4 The projects proposed in this MoU will be leading to clinically significant products for orthopaedic, periodontal and wound healing applications. Both CUSAT and PRC organizations will be equally benefited in terms of technology transfer by the MoU through the successful conduct of the projects and present opportunities for the development and growth of biomedical industries in India

6. ENTIRE MOU AND AMMENDMENTS

- 6.1 This MOU represents the entire understanding between CUSAT and PRC and supersede any and all understanding either oral or written hitherto with respect to the subject matter of the MOU.
- 6.2 No amendments or modification of the MOU shall be valid unless same is made in writing and signed by the parties. The modifications/changes shall become part of the MOU from the date on which they are made / executed, unless otherwise agreed to.
- 6.3 The terms of cooperation under this MoU shall be mutually discussed and agreed upon in writing by both parties prior to the initiation of that activity. Details of the implementation of any particular/further collaboration agreement shall be negotiated between the two Institutions as and when a specific case arises. Such agreement will be legitimized by the completion of a specific Memorandum of agreement.

7. FORCE MAJEURE

Neither the party shall be responsible or liable for any failure to perform any of the terms and conditions of the present agreement, due to unforeseen circumstances or causes beyond the reasonable control of either party, including but not limited to acts of God, war, riot, embargoes, acts of civil of military actions, fires, floods, accidents, terrorist activities, strike, quarantine, civil commotion, action of government in its sovereign capacity or shortage of transportation, facilities, fuel,

energy, labour or materials. In the event of any such delays, delivery date for a period equal of the time of such delay may be decided on mutual understandable basis. If force majeure continues beyond six months the parties will then decide the future course of action.

8. EFFECTIVE DATE AND DURATION OF THE MOU

- 8.1. This MOU shall be effective from the date of signing and remain valid for a period of 3 years.
- 8.2. The validity of the MOU may be extended by an agreement in writing and signed by both the parties.

9. ARBITRATION

- 9.1. In the event of any dispute or difference between the parties hereto, such disputes or differences shall be resolved amicably by mutual consultation. If such dispute or difference is not resolved then such difference shall be referred to an Arbitrator as the proceedings shall be as per **the Arbitration and Conciliation (Amendment) Act, 2015**. The decision of the Arbitrators shall be final and binding upon parties to the dispute. The arbitration proceeding shall be held at Kochi. This MoU shall be governed and interpreted in accordance with the Indian Laws.

In witness whereof, the parties hereto have signed this MOU on the day, month and year mentioned herein before.

Parties:

For and on behalf of
Cochin University of Science
And Technology (CUSAT)

For and on behalf of
Pushpagiri Research Centre



Name: Dr. K. Ajitha

Designation: REGISTRAR



Name: Rev. Dr. Mathew Mazhavancheril

Designation: DIRECTOR

Witnesses (Name & address)

Witness (Name and Address)



Name: Mr. Vinod Kumar P.
Designation: Director IRAA



Name: Dr. Yogesh Dalvi
Designation: Scientist & Research
Coordinator

Witnesses (Name & address)

Witness (Name and Address)



Name: Dr. Sailaja G. S.
Designation: Associate Professor
PS & RT
Cochin University of Science and
Technology (CUSAT)



Name: Dr. Nebu George Thomas
Designation: Professor in Periodontics Department
& Scientist
Pushpagiri Research Centre
Thiruvalla