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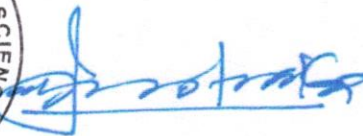

MEMORANDUM OF UNDERSTANDING FOR RESEARCH AND ACADEMIC COLLABORATION

This MEMORANDUM OF UNDERSTANDING (hereinafter referred to as 'MoU') for Research collaboration is executed on this 15th day of June 2025 ("Effective Date")


BY AND BETWEEN

Council of Scientific and Industrial Research, a registered society having its registered office at Anusandhan Bhawan, 2, Rafi Marg, New Delhi 110001, acting through its constituent laboratory **National Institute for Interdisciplinary Science & Technology** at Industrial Estate, P.O., Pappanamcode, Thiruvananthapuram – 695019 (hereinafter referred to as 'CSIR-NIIST') of the **FIRST PART**.


D. P.
38053
12-11-24
No. 3 Dist. Court Vendo
Leena Thekkekkara TC



Fr. Julius Arakkal CMI
Director



Amala Cancer Hospital
Society
Amala reges





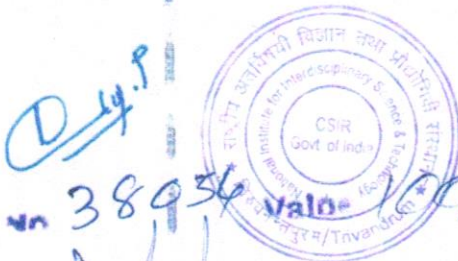
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AND

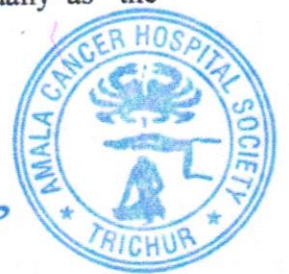
Amala Institute of Medical Sciences (an Undertaking of Amala Cancer Hospital Society), is a National Medical Commission approved private medical college having its principal office at Amala Nagar, Thrissur, Kerala, which expression shall, unless repugnant to the context or meaning thereof, be deemed to mean and include its affiliates, successors-in-title and permitted assigns (hereinafter referred to as 'AIMS') of the **SECOND PART**.

NATIONAL INSTITUTE FOR INTERDISCIPLINARY SCIENCE AND TECHNOLOGY (NIIST) and AMALA INSTITUTE OF MEDICAL SCIENCES (AIMS) and hereinafter collectively referred to as 'the Parties' and individually as 'the Party'.



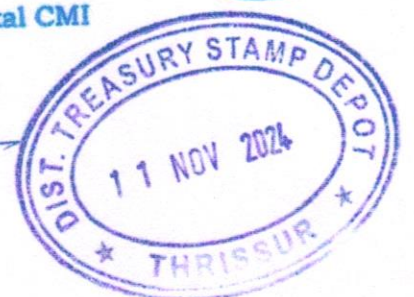
Pr. Julious Arakkal

Pr. Julious Arakkal CMI
Director



12-11-24
No. 3 Dist. Court Vendo
Leena Thekkekkara TCF

Amala Cancer Hospital
Society
Amalapuram



WHEREAS:

- A. Amala Institute of Medical Sciences** (an undertaking of Amala Cancer Hospital Society) is a private medical college recognized by National Medical Commission of India and affiliated to Kerala University of Health Sciences, situated in the city of Thrissur, Kerala. It was established by CMI congregation under Devamatha Province, represented by its director, Rev. Fr. Julious Arakkal, CMI. AIMS is granted permission to start as medical college in year 2003. The institute is offering undergraduate programme and post graduate programme in broad specialties and super specialties. The institute has started an integrated medical research department to foster the interdisciplinary research activities.
- B. CSIR-NIIST** is a National Institute with excellent laboratory facilities with strong interdisciplinary research expertise in chemical science, material science, biotechnology, and process engineering, having different core expertise on synthesizing bioactive small molecules, synthetic and nanocarrier for drug delivery, dyes and pigments, polymer, supramolecular assemblies, nanomaterials, self-assemblies, bio-fuels etc. **CSIR-NIIST** initially established in 1975 hereby represented by its Director, Dr. C. Anandharama krishnan. The institute has been playing a significant role in Human Resource Development by training post graduate/graduate students, with over 252 Ph.D degrees awarded till date, based on research conducted in the institute. NIIST is offering various skill development and up-skilling courses for undergraduates, postgraduates and to the unemployed youth. The institute is enriched with world-class facilities and is empowered with a young dynamic faculty and staff.
- C.** The Parties are now entering into this MoU to establish a mutual framework governing the respective organizational relationships, responsibilities, and activities between the parties while carrying out the research collaboration enumerated under 1.1 and 1.3. This MoU is primarily for the utilization of the expertise of **AIMS** and **CSIR-NIIST** for research leading to the joint development of academics, different projects for diagnosis, prognosis, biomarkers, drug delivery, materials synthesis, etc., in the field of chemistry, biology, agriculture, biotechnology and nanotechnology and hence, it has a societal application. The areas of responsibility and relationships presented herein provide the concept under which the programme will be executed.

D. P.



Fr. Julious Arakkal

Fr. Julious Arakkal CMI
Director



NOW, THEREFORE, THIS MOU WITNESSETH AS FOLLOWS:

1. SCOPE AND OBLIGATIONS:

1.1 Research Collaboration

- a) The research and academic collaboration will focus on the feasibility of **AIMS and CSIR-NIIST** to jointly undertake advisory, research & development programs with the objectives set out by a joint collaborative research project.
- b) The Parties envisage collaborative research work in the areas of cancer biology, nanotechnology, sensors, biomaterials, biomarkers, drug delivery, therapy agriculture, material synthesis, and environmental biotechnology within the scope of this MOU.
- c) The faculties and researchers of both institutes can use the necessary instrument/ infrastructure facilities of the two institutions by the approval from the respective authorities/in charge of the concerned institutions.
- d) Joint projects and programs in research and development, including the data exchange of publications, patents and reports.
- e) Jointly submit research proposals of multi-disciplinary nature for funding and other necessary approval from the national organizations (under Govt of India), i.e Department of Science and Technology (DST), Department of Biotechnology (DBT), Indian Council of Medical Research (ICMR), Ministry of Electronics and Information Technology (MeitY), Ministry of Earth Science (MoE), University Grants Commission (UGC) etc.
- f) To jointly organize short-term continuing education programmes, to organize seminars, conferences, or workshops on topics of mutual interest, and invite faculty members and students from both the institutions to participate therein.

1.2 Academic Collaboration:

- a) Students exchange program: The Parties may exchange students at the undergraduate, postgraduate, and doctoral levels. The Parties will mutually discuss and decide the areas of studies and credits to be pursued under the scheme. Both parties agree that the exchange programme for degree training should follow the educational system and regulations of the hosting party.
- b) Internships and Project work: The parties may design and develop basic research or applied project assignments that students will pursue during their stay, both for short-term and long-term durations, at the institution of the hosting party.
- c) Faculty exchange: The Parties may consider a Faculty exchange programme during which their respective faculty members will offer courses at the other institute, for which the course contents will be developed jointly.

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Fr. Julious Arakkal CMI

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Director



1.3 Research Plan

The research shall be conducted in accordance with the research plan agreed upon and exchanged by the parties as per clause 1.1, concurrent with the execution of this MoU. The Research Plan defines the key discussion points, timelines for key decision points, resource and funding allocation, and other details.

1.4 Responsibilities of AIMS

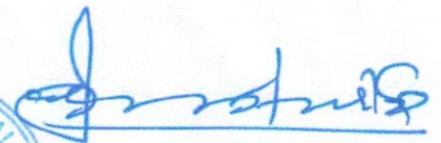
- a) Shall provide laboratory support for the research, including necessary instruments, lab facilities and technical manpower based on the rules and regulations of AIMS.
- b) Shall provide Clinical and preclinical research facilities based on the rules and regulations of AIMS.
- c) Shall provide quality assurance support if requested by CSIR- NIIST for the research collaboration covered under this MoU.
- d) Shall be a co-applicant for research project funding under subclause d of Clause 1.1.

1.5 Responsibilities of CSIR-NIIST

- a. Shall provide laboratory support for the research, including necessary instruments and technical manpower based on the rules and regulations of the respective institutes.
- b. Shall do characterization studies of the prepared molecules and nanomaterials using NMR, HR-MS, LCMS, GCMS, Maldi-Toff, X-ray diffraction (XRD), Fourier transform infrared spectroscopy (FTIR), X-ray photoelectron spectroscopy (XPS), Raman spectroscopy and high-resolution transmission electron microscopy (HRTEM), Scanning Electron Microscopy (SEM), Atomic Force Microscopy (AFM) etc.
- c. Synthesis of various molecules and nanomaterials for sensing, imaging, and targeted therapy shall be supported based on mutually formulated projects.
- d. In vitro bio-assays: cell-based assays, bio-chemicals assays
- e. Both Parties will jointly apply for the necessary Regulatory Approvals for the collaborative project covered under the activity and both Parties will render necessary assistance for the same.
- f. Shall be co-applicant of research projects for funding under sub clause d of Clause 1.1.

1.6 Joint Responsibilities

- a. Both Parties will jointly apply for the necessary Regulatory Approvals for the collaborative project covered under the activity, and both Parties will render necessary assistance for the same.
- b. Joint Initiation of academic activities between two institutes as mentioned in Clause 1.2.



Fr. Julious Arakkal CMI
Director

2. FINANCES

- a) Funding for the collaborative research project may be obtained from an external funding agency or AIMS or CSIR-NIIST through the joint application from both Parties.
- b) The manpower and resources are to be met from the project funding in accordance with the approved budgets of both parties. Each party will execute its responsibilities from the resources available from the project with each institute. Manpower and funding resources will be used as per the guidelines of the funding agency.
- c) Funding guidelines will be followed for utilization by both Parties.
- d) Separate auditable accounts will be kept by both Parties and made available for audit to authorities.
- e) Utilization of funds will depend on the project and will be determined separately.
- f) Project funds will be shared between the parties as per the project requirement based on the input from the Principal Investigators from both sides.
- g) During the term of this MoU and for a period of two years thereafter, both parties will keep complete and accurate records of the projects.

3. WARRANTIES

- a) The Parties warrant that the information or material furnished or shared by it shall be accurate and complete and not infringing upon third-party rights.
- b) There shall be no implied warranty under this MoU.
- c) In the event of any breach of warranty, the Party concerned will rectify such breach at no cost to the other Party.

4. INTELLECTUAL PROPERTY

- a) All registered or unregistered patents, copyrights, trademarks, trade secrets and other intellectual property of each Party (collectively referred to as "Intellectual Property") shall remain the sole and exclusive property of such Party, and nothing contained in this MoU shall be deemed to assign, license, sell or otherwise transfer such Intellectual Property to the other Party and the other Party shall be entitled to use the Intellectual Property only for the limited purposes of this MoU.
- b) Any intellectual property that is developed during the course of this MoU by way of Cooperative Activities will be jointly registered to vest in favour of both Parties in the country and/or abroad and will be owned jointly. However, the extent of ownership/ usage can be decided mutually to vary. The parties shall comply with the provisions of Section 39 and Section 118 of the Patents Act, 1970.
- c) Any publication and/or paper arising out of the joint work conducted by the institutions pursuant to this MoU will be jointly owned. The use of the name, logo and/or official emblem of the participants on any publication, document and/or paper will require prior permission of both the participants. It may, however, be ensured that the official emblem and logo are not misused.

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Director

d) In the case of technologies developed jointly by CSIR-NIIST and AIMS through the projects funded by CSIR itself, CSIR shall have the exclusive right to license/sublicense the technology worldwide. In the case of technologies developed jointly by CSIR-NIIST and AIMS through the projects funded by AIMS itself, AIMS shall have the exclusive right to license/sublicense the technology worldwide. In the case of technologies developed jointly by AIMS and CSIR-NIIST through funding from any external agency, commercialization/licensing will be done according to the terms and conditions laid down by such funding agency.

e) In the case of technologies jointly developed by AIMS and CSIR-NIIST having no encumbrance to the funding agency, royalty obtained from third parties (licensees) shall be equally shared between AIMS and CSIR-NIIST. If the funding agency too has a claim on royalty share, then the share of each party shall be decided on mutually agreed terms.

f) CSIR-NIIST shall execute agreements with third parties (licensees) for receipt of royalty if the projects are funded by CSIR, according to terms and conditions mutually agreed upon with such licensee (third party).

g) AIMS shall execute agreements with third parties (licensees) for receipt of royalty due if the projects are funded by AIMS, according to terms and conditions mutually agreed upon with such licensee (third party).

h) During the term of this MoU and for a period of licensing thereafter, the Developing Party shall keep complete and accurate records pertaining to the results and other details.

5. CONFIDENTIALITY:

a) The Parties shall retain in confidence and shall not, without the prior written consent of the disclosing Party, disclose or use in any manner any information that they may have been provided with or may have access to or materials disclosed or developed by it for the purpose of fulfilling its obligations under this MoU, whether marked as confidential or not (collectively referred to as “**Confidential Information**”) to any third party, unless such information or materials are required to be disclosed under any Laws of the country except that the party may use the information for its education, research or publication requirements.

b) For the purpose of this MoU, the expression “Confidential Information” shall not include the following:

- i. Information in the public domain without breach by the recipient.;
- ii. Information in the possession of the recipient prior to receipt from the disclosing party; or
- iii. Information acquired by the recipient from a third party not under an obligation of confidentiality or non-use.

c) Either Party shall not use the name of the other for any business or advertisement purpose except with specific written approval of the other Party.

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Fr. Julious Arakkal CMI

Fr. Julious Arakkal CMI
Director

- d) Upon termination of this MoU or upon receipt of a request thereof by the disclosing Party, the recipient Party shall promptly deliver to the disclosing Party all copies and originals of all documents, records, software, media and other materials containing any Confidential Information forthwith or destroy any such material or Confidential Information, upon receiving a written request from the disclosing Party;
- e) The disclosure of Confidential Information by either Party shall not amount to a license, assignment or transfer of any right, title or interest to the other Party. Each Party shall be the sole and absolute owner of all intellectual property in and with respect to its Confidential Information during the term of this MoU and thereafter;
- f) The recipient Party shall use the same degree of care that it would use to protect its own confidential information, but in no event less than a reasonable amount of care.
- g) Nothing in this MoU shall denote any express or implied relationship between the Parties in the nature of agency, partnership or any other such relationship.
- h) The confidentiality obligations under this Clause shall survive the termination of this MoU.

6. REPORTS AND PUBLICATIONS:

- a) Publications in the form of research articles in scientific journals will be made from time to time as appropriate. Submission of research papers to journals will be made at any time after having all the complete results/ data of each individual study as determined and agreed upon.
- b) Research articles come out of the collaborative work will bear, the names of the respective Scientist (research person) or clinician who is leading the study from both AIMS and CSIR-NIIST as the corresponding author (authors) with co-authorships to other researchers involved. The parties hereby agree to share all the information, experimental results, and all the necessary and relevant data on a timely and prompt basis as agreed upon.

7. CONTACTS OF THE PARTIES FOR NOTICE / COMMUNICATION:

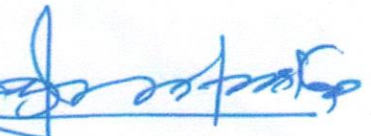
- a) Any notice under this MoU shall be in writing which includes email, except as set out in this clause. Any notice alleging breach or termination must be delivered by registered post to or left (and signed for) at the respective addresses mentioned in the MoU (or such other address as may be notified in writing) addressed to authorized persons of the relevant Party named below.
- b) The Contacts of the Parties for any communication shall be as follows:

Amala Institute of Medical Sciences

- 1) Dr. Vishnu Priya Murali,
Scientist C/Senior Scientific Research Officer,

D. Vijay P.




Fr. Julious Arakkal CMI
Director

Amala Integrated Medical Research Department,
Amala Institute of Medical Sciences, Thrissur-680 555, Kerala
Email: vishnupriyaem@gmail.com Phone: 9895143535

- 2) Director
Amala Institute of Medical Sciences
Amala Nagar, Thrissur-680 555, Kerala

CSIR-NIIST

- 1) Dr. Kaustabh Kumar Maiti
Sr. Principal Scientist & Head
Microbial Processing and Technology Division (MPTD)
CSIR-NIIST, Industrial Estate PO, Pappanamcode
Thiruvananthapuram-695019, Kerala
Email: kkmaiti29@gmail.com Phone: 8547761544
- 2) Director,
CSIR-NIIST
Industrial Estate PO, Pappanamcode,
Thiruvananthapuram-695019, Kerala

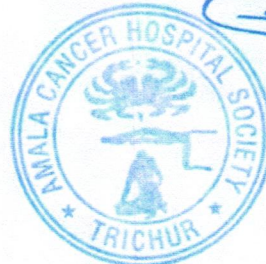
8. TERM

- a) This MoU shall come into force on the Effective Date which is 15th of June 2025 and the term of this MoU shall be for a period of 3 years (“Term”) from the Effective Date as mutually agreed to by the Parties, unless terminated earlier in accordance with this MoU or in case of any unforeseen exigencies or delays.
- b) The Parties may mutually choose to extend the Term for such further periods as they may deem fit. However, if no such period is arrived at the end of the Term, this MoU shall be deemed to have expired.

9. TERMINATION

- a) Either Party may terminate this MoU at any time, with or without assigning any reason thereto, by giving prior written notice of 60 (sixty) days to the other Party.
- b) The Parties shall be entitled to immediately terminate this MoU upon a breach of any of the terms of this MoU by the other Party and upon failure of the Party in breach to rectify the breach within fifteen (15) days from the date of receipt of written notice of such breach from the other Party.

D. Jay. P.



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Director

- c) The Parties may also, by mutual agreement, terminate this MoU.
- d) Upon termination or expiration of this MoU:
- i) The Parties shall forthwith return all material, information and copies thereof belonging to the other Party.
 - ii) Neither Party shall use the other Party's Confidential Information and/or the material collected/developed for the purpose of this MoU or any part thereof, directly or indirectly, for any reason whatsoever;
- e) Termination of this MoU shall not affect the rights and obligations of the Parties accrued during the Term or the validity of the clauses on Confidentiality (Clause 5), Intellectual Property (Clause 4), Indemnity and Limitation of Liability (Clause 10), Governing Law and Dispute Resolution (Clause 11).
- f) Notwithstanding the above mentioned, the provisions of this MOU or any other written agreement in respect of any on-going exchange programme or any other form of cooperative activity under this MOU shall continue to apply until their completion unless both Parties mutually agree in writing to the earlier termination of the programme or cooperative activity.

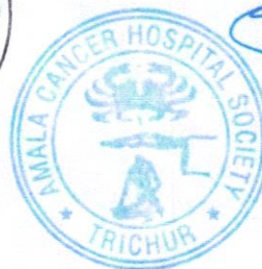
10. INDEMNITY AND LIMITATION OF LIABILITY

- a) Both parties shall indemnify, defend and hold harmless the Institute from and against any and all claims, damages, and losses incurred due to any breach, negligence or willful misconduct.
- b) Neither Party shall, in any event, be liable for any indirect, consequential or incidental damages arising out of or in relation to this MoU.
- c) Both Parties shall be solely responsible for compliance with all central, state and local laws, including, but not limited to, compliance with regulatory agency regulations, intellectual property infringement, data security and other individual third-party contracts.

11. GOVERNING LAW AND DISPUTE RESOLUTION:

- a) This MoU shall be interpreted in accordance with and governed by the laws of India. All disputes arising out of or relating to the MoU shall be deemed to have arisen in Thrissur City, India, and only courts having jurisdiction over Thrissur City, India, shall determine the same.
- b) Any dispute that may arise with regard to the interpretation of and/or compliance with the role/ responsibility of the Parties with reference to this MoU shall be mutually discussed and resolved amicably.

D. Jay.P



Fr. Julious Arakkal CMI

Fr. Julious Arakkal CMI
Director

c) The first appellate authority in this regard shall be the Director of AIMS and the Director of CSIR-NIIST. However, in the unlikely event that the dispute still persists, then any Party shall be entitled to refer such controversy, dispute, or difference to be resolved by arbitration in accordance with the Arbitration and Conciliation Act, 1996 or any statutory modifications on re-enactment thereof as in force. The language to be used in the mutual discussions and in the arbitration shall be English.

d) In any arbitration commenced pursuant to this clause, the sole arbitrator shall be appointed by the mutual consent of the parties as per the provisions of the Arbitration and Conciliation Act, 1996.

e) The seat, or legal place, of arbitration shall be Thrissur, India. The cost of the Arbitration proceedings shall be shared equally by both parties.

12. REVIEW AND AMMENDMENT:

a) This MoU will be reviewed jointly by the Parties annually to ensure adequate identification of support requirements. Additional reviews may take place when changing conditions or circumstances require substantial changes or the development of a new MoU. Minor changes may be made at any time after mutually agreed by the Parties by correcting the existing document for attaching a memorandum to a basic document.

b) Modifications: Any changes, amendments, or interpretations of this MoU shall be valid only if they are in writing and signed by both parties, except that each Party may make a change of domicile or change of the name of the person to whom notice shall be sent with prior intimation to the other party.

13. GENERAL TERMS:

a. Entire Agreement: This MoU constitutes the entire understanding and agreement between the Parties with respect to the subject matter hereof and supersedes any and all prior oral or written agreements, promises, representations, arrangements, understandings, and all other communications relating thereto. Where any purchase order/work order ('PO') is issued in connection with the Services, it is hereby mutually agreed between the Parties that no pre-printed terms contained or referred to in the PO will be applicable, and the Services shall be solely governed by the terms and conditions under this MoU.

b. Severability: If any provision of this MoU is held invalid, unenforceable or illegal in whole or in part for any reason, the invalidity, unenforceability or illegality shall not affect the validity, enforceability or legality of the remaining provisions hereof, and the MoU will be construed as if such invalid, unenforceable or illegal provision was not part of the MoU.

c. Agency: The Parties are independent, and this MoU will not establish any relationship of partnership, joint venture, employment, franchise or agency between the parties.



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Director

d. Force Majeure: The Parties shall not be liable for any failure to perform any of its obligations under this MoU if the performance is prevented, hindered or delayed by a *Force Majeure* event (defined below), and in such case, its obligations shall be suspended for so long as the *Force Majeure* event continues. Each party shall promptly inform the other of the existence of a *Force Majeure* event and shall consult together to find a mutually acceptable solution.

"*Force Majeure* event" means an event which is beyond the reasonable control of the Parties concerned, including, without limitation, unavailability of any communication system, sabotage, fire, flood, explosion, acts of God, civil commotion, strikes or industrial action of any kind, riots, insurrection, war or acts of government.

In witness whereof the parties have signed this Memorandum of Understanding on 15th June 2025 in the city of Thiruvananthapuram, in the state of Kerala.

Director
Amala Institute of Medical Sciences
Amala Nagar, Thrissur
Kerala – 680 555



WITNESSES

Dr. Vishnu Priya Murali
Scientist C/SSRO
AIMRD
Amala Institute of Medical Sciences
Thrissur – 680 555
Kerala, India



Head, Business Development Division
CSIR-NIIST
Industrial Estate PO,
Pappanamcode, Thiruvananthapuram
Kerala, India - 695547



सी एस आई आर
CSIR
भारत का नवाचार इंजन
The Innovation Engine of India

डॉ. पी. निशु
Dr. P. NISHY
प्रधान, व्यापार विकास प्रभाग
Head, Business Development Division
सी एस आई आर-राष्ट्रीय अंतरविषयी विज्ञान तथा प्रौद्योगिकी संस्थान
CSIR-National Institute for Interdisciplinary
Science and Technology (NIIST), Govt. of India
तिरुवनन्तपुरम / Thiruvananthapuram-695 019.

Dr. Kaustabh Kumar Maiti
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Dr. BETSY THOMAS
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