

14.03.2019

MEMORANDUM OF UNDERSTANDING (MoU)

Between

**Alva's Education Foundation, Moodubidire
and**

Yenapoya, Deemed to be University, Mangalore.

This Memorandum of Understanding (MOU) sets for the terms and understanding between the Alva's education Foundation, Moodubidri (Partner 1) and Yenapoya ,Deemed to be university (Partner 2) to share the infrastructure for sports training, evaluation tools, methods of athletic training and research for the betterment of sports performance at National and International level.

2. Objectives of MoU

In order to share the infrastructure for sports training availed between the institution like,

- Sharing of indoor and outdoor sports facilities.
- Professional approach of teaching values with scientific approach.
- Sharing of coaching values with advance technical approach.

2.Terms and Conditions

- MoU may be amended, renewed, and terminated by mutual written agreement of institute at any time.
- Either **Institute** shall have the right to terminate this MoU upon 30 days prior written notice to the other **Institute**.

5. Duration of MoU

This MoU, unless extended by mutual written consent of the **Institutes**, shall expire on 15th March 2025 from the effective date specified in the opening paragraph. However, on review,the MoU shall be extended for another five years on mutual consent.

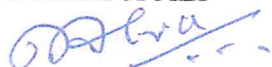
6.Intellectual Property Rights:

The Intellectual Property Rights (IPR) that arrise as a result of joint research and collaborative activity, under the agreement will be worked in the case to case basis and will be consistant with officially laid down IPR policies of two institutes.

7. Signed in Duplicate

This MoU is executed in duplicate with each copy being an official version and having equal legal validity. By signing below, the Institutes, acting by their duly authorized officers, have caused this Memorandum of Understanding to be executed, from the effective day and year as mentioned above .

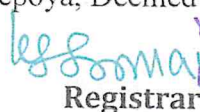
On behalf of AEF



**Dr. M. Mohan Alva
Chairman**

Alva's Education Foundation

On behalf of Yenapoya, Deemed to be university



**Dr. Gangadhara Somayaji K S
Registrar**

**Yenapoya,Deemed to be university
Mangalore.**

**Dr. Gangadhara Somayaji K S
Registrar
Yenapoya (Deemed to be University)
University Road, Deralakatte
Mangalore 575 018, Karnataka.**

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING IS DATED 03 MONTH 14th DAY

OF 2019 AND MADE BETWEEN:

1. The **CSIR-Indian Institute of Chemical Technology (IICT)**, Uppal Road, Tarnaka, Hyderabad-500 007, India, a constituent unit of the Council of Scientific and Industrial Research (CSIR), a Society registered under Societies Registration Act (XXI of 1860), having its registered Office at Anusandhan Bhavan, Rafi Marg, New Delhi – 110 001.

(hereinafter referred to as **CSIR-IICT**, which expression shall where the context so admits include its successors and permitted assignees)

And

2. Yenepoya (Deemed to be University), Mangalore, Karnataka, India (hereinafter referred to as **YU**, which expression shall where the context so admits include its successors and permitted assignees) of the other part.


1.0 Introduction:

- 1.1 CSIR- IICT & YU agree to enter into a joint collaboration for biological research on cancer especially for developing and optimizing therapeutics against cancer stem cells which epitomize the highly drug-resistant phenotypes in cancer.
- 1.2 This Memorandum of Understanding (“MOU”) sets out below the principles followed by the CSIR- IICT & YU that can establish a formal agreement regarding such activity.

2.0 Fields of Competence (CSIR- IICT):

The Indian Institute of Chemical Technology (CSIR-IICT) is a leading Institute in India with expertise in several branches of chemistry especially in Organic Synthesis including Agrochemicals, natural products, medicinal chemistry, physical photochemistry backed up by world class analytical services and equipment for automated chemistry.

Terminal diseases, like cancer is given special attention and several programs are underway for development of new chemical entities as anti cancer therapeutics.

ATTESTED

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IICT has also taken a lead in the development of drug delivery systems, especially for anticancer drugs. The integrin receptor specific liposomal delivery systems were found to be highly efficient for targeting anti-cancer drugs/genes selectively to tumor vasculatures in anti-angiogenic cancer therapy. IICT has also developed Sigma Receptor, Estrogen Receptor, Folate Receptor, Glucocorticoid Receptor-Specific liposomal delivery systems for use in Targeted Cancer Therapy. To screen and for preclinical evaluation of new delivery systems and therapeutics, target-based biochemical screens and cell-based screens for biological activity against diseases, a dedicated chemical biology facility is also arranged as part of research.

Fields of Competence (YU):

The Yenepoya (Deemed to be University) is one of the premier private Universities in southern India with expertise in several branches of medical fields. The major strength of this University is its existence primarily as a Medical University, thereby enabling the accessibility of patient samples. Yenepoya Research Centre (YRC) of YU is an upcoming research centre that was established in 2008. YRC was initially established to serve as a central research support system for the constituent colleges (Medical, Dental, Pharmacy, Nursing and Physiotherapy) of Yenepoya (Deemed to be University). YRC has state-of the art facilities to support high quality research in interdisciplinary/multidisciplinary areas to meet the contemporary challenges. Currently, part from being a central research facility, various research groups/divisions are operational in YRC undertaking independent basic/applied research work. All of these research groups/divisions in YRC have internationally trained faculties with highest credentials. The research work in YRC is primarily funded with extramurally received funds from various agencies of the Government of India, as well as, YU's intramural funding.

Stem cell and regenerative medicine centre (SCRMC) is a division under YRC having that undertakes specialized research work in the area of regenerative and cancer stem cell biology. This group/division has established the basic biology of breast and colon cancer stem cells and its targeting using water soluble vitamins.

3.0 Principles

3.1 The activities covered by this MOU will centre on the following:

- i. To develop newer, targeted delivery systems and cancer stem cell (CSC)-targeting molecules by CSIR-IICT.
- ii. Isolation, maintenance, propagation of cancer stem cells.
- iii. Exchange of materials and cell lines between the CSIR-IICT and YU
- iv. To conduct biological testing of the new chemical entities and delivery systems synthesized or developed by CSIR-IICT on the CSCs isolated in YU in both the Institutes, CSIR-IICT and YU.

- v. To conduct tests or experiments with CSIR-IICT materials on patient derived primary cells and on patient derived samples' humanized animal models in YU in accordance with proper human ethical clearance.
- vi. For the flow of research there shall be exchange of students between CSIR-IICT and YU.
- vii. Output of the results will be shared in the form of joint-co-authored research publications. The exchange of publications and other materials (related to publications and reports) is of common interest.
- viii. All reports to be sent for publication arising out of the joint research will bear names of investigators from both the institutions.
- 3.2 Any activity carried out within the broad framework of this MOU shall be the subject to the mutual consent of parties, taking into account any constraints of time, funding and other relevant resources.
- 3.3 It is recognized that the work carried out jointly through the collaboration will require special intellectual property protection. Legal agreements defining joint technology development will need to be implemented and will need to recognize the nature of the collaboration.
- 3.4 For the entire duration of the '**Joint Collaboration**' the partners undertake to seek each other's consent for the publication of any results arising from the research carried out by the Parties. This consent may only be withheld where justified.
- 3.5 In case of IP generated out of the outcome of the joint research, it must be first patented by either of the parties before they go into its publication.
- 3.6 If the outcome of the collaboration studies yields encouraging results useful to society or industry then, it can be pursued for attracting external funding from Govt. /Pvt. Agencies for advancement of the developed technology/process and for such purpose a joint research proposal can be submitted.
- 3.7 The intellectual property rights arising out of the programme shall be the common property between the two organizations. CSIR-IICT shall file the joint patent application and all the necessary support like the persons who have directly contributed to the intellectual property generation shall be mentioned as inventors by CSIR-IICT and YU.
- 3.8 The sharing of intellectual property among the two organizations shall be in the ratio of 50:50 (CSIR-IICT and YU).
- 3.9 The expenditure connected with securing and maintaining the Intellectual Property Rights shall be shared equally in the above said ratio by CSIR-IICT and YU.
- 4.0 The sharing of revenues, in case if it is licensed / commercialized shall be shared in the above said ratio between the two Institutes, namely 50:50 (CSIR-IICT and YU).

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4.1 The molecules and delivery systems provided by CSIR-IICT if found active in biological testing in CSCs, will also be tested in advanced animal models developed in both CSIR-IICT and YU after obtaining appropriate clearances from the Animal Ethics Committee.

5.0 Separate Agreements: In addition, it is envisaged that each activity, that the parties wish to pursue in accordance with the purpose of this MOU will be governed by terms and conditions to be separately negotiated and mutually agreed upon by the parties through the signing of one or more subsidiary agreements.

6.0 Renewal Amendment and Termination:

6.1 This MOU shall be effective for an initial period of 5 years from this date. Thereafter, this MOU may be extended for further periods of 5 years or for any other period of time as deemed appropriate by both parties, subject to their mutual consent any such extension to be made in writing.

6.2. Either party may amend or vary this MOU at any time provided it is with the prior written consent of both parties.

6.3. Either party may terminate this MOU at any time by giving six month's notice to the other party in writing.

7.0 General

7.1 The parties to this MOU shall not be deemed to be in breach of this understanding or otherwise liable to any other party in any manner whatsoever for any failure or delay in performing or initiating the activities proposed in this MOU.

7.2 This MOU records the understanding between the parties and is not intended to be a legally binding document and shall not be enforceable in any court of law.

Registrar
For/on behalf of

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CSIR-IICT
[For/on behalf of]

Signed ks somayaji

Signed Dr. P. Radha Krishna 14/3/2019

Name: Dr K S GANGADHARA SOMAYAJI
Registrar
Yenepoya (Deemed to be University)
University Road, Deralakatte
Mangalore 575 018

Designation: Registrar

Date: 20/03/2019

Seal:

Name: डॉ. पि. राधा कृष्णा
Dr. P. Radha Krishna
मुख्य वैज्ञानिक एवं अध्यक्ष / Chief Scientist & Head
ज्ञान एवं सूचना प्रबंधन प्रभाग
Knowledge & Information Management Division
सीएसआईआर-भारतीय रासायनिक प्रौद्योगिकी संस्थान
CSIR-Indian Institute of Chemical Technology
Tarnaka, Hyderabad - 500 007, Telangana, India.

Designation:

Date:

Seal:

Witnesses

1)

Name:

Designation:

Affiliation:

2)

Name:

Designation:

Affiliation:

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