



सत्यमेव जयते

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Unique Doc. Reference : SUBIN-KAKACRSFL0860334874499972U
Purchased by : UNIVERSITY OF MYSORE
Description of Document : Article 37 Note or Memorandum
Description : MOU
Consideration Price (Rs.) : 0
 (Zero)
First Party : UNIVERSITY OF MYSORE
Second Party : NANO RAM TECHNOLOGIES
Stamp Duty Paid By : UNIVERSITY OF MYSORE
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Please write or type below this line

Memorandum of Understanding

The Memorandum of Understanding is made on 08th November, 2022

Between

The University of Mysore, Mysuru having its registered office at Mysuru, Karnataka represented herein by its Registrar (here in after referred to as the *University of Mysore*) of the one part:

And

The Nano Research for Advanced Materials (RAM) Technologies #27-D, KIADB, Bidadi Industrial Area, Bidadi, Bangalore-560109, Karnataka now being represented by its Managing Director (here in after referred to as *Nano Research for Advanced Materials (RAM) Technologies*) of the two part:

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University of Mysore
MYSURU-570 005

Nano Ram Technologies

Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding Corporation of India Limited. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
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GOVERNMENT OF KARNATAKA

The University of Mysore, Mysuru and The Nano Research for Advanced Materials (RAM) Technologies (here in after referred to singularly as *the Participant* and collectively as *the Participants*)

Whereas, the institute has developed proof of concept with regard to silk fibroin scaffolds, films and Bioink for Bioprinting for biomedical applications and possess the required facility both in the department and Vignana Bhavan to undertake research work and train the stake holders.

Whereas, the institute has identified Nano RAM Technologies, Bangalore to carry out part of this study that will involve providing necessary nano-materials and services required for integration of Silk fibroin/sericin based scaffolds, films and Bioink for Bioprinting for biomedical applications. Besides, it is planned to establish **Center for Innovative Nanoengineered Technologies** (CINT) to undertake related research and training.

About University of Mysore

The University of Mysore is one of the famous, prestigious and very few oldest universities in India. The University was founded as a result of the efforts made by the benevolent and visionary Maharaja of erstwhile Princely State of Mysore His Highness 'Rajarshi' Shri Nalvadi Krishnaraja Wadiyar –IV (1884-1940) and the then Diwan Sir.M.Vishvesvaraya (1860-1962). Prior to that, all the institutions of Higher Education and Colleges within the Mysore State was under the administration of Madras Presidency and were functioning under Madras University.

Mysore University is the first University in Karnataka State to be accredited by NAAC and has undergone NAAC Accreditation Thrice – First in 2000 with 'Five Star' Status, second time in 2006 with a 'A+' Level and for the Third time in 2012 with a CGPA score of 3.47 on a 4 point scale. NAAC has designated Mysore University as a 'High performing Institution;'. The University Grants Commission has placed Mysore University Under Tier –II Category of Graded Autonomy. Govt. of India has recognized Mysore University as "Institution of Excellence (IOE) in 2008 while the UGC has recognized Mysore University as a University with Potential for Excellence (UPE) in 2009. On the other hand Mysore University is also recognized as a centre with potential for Excellence in a Particular Area (CPEPA). On the recommendations of Karnataka Knowledge commission, the Karnataka government has considered Mysore University as an "Innovative University". Current Science has ranked Mysore University as one of the top 20 Universities Scientific and Research endeavors.


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From the four PG Campuses namely Mysore (Manasagangothri), Mandya (Thubinakere), Hassan (Hemagangothri) and Chamarajanagar (Suvarnagangothri) there are 63 PG Departments offering 76 Postgraduate, M.Phil and Ph.D. Programmes. There are 219 affiliated colleges.

About Nano Research for Advanced Materials (RAM) Technologies

Nano Research for Advanced Materials (RAM) Technologies (RJR/61/2008-2009), established on 5th May 2008, having its registered office situated at #27-D, KIADB, Bidadi Industrial Area, Bidadi, Bangalore-560109, Karnataka State, India.

Managing Director of Nano RAM Technologies: Dr. A R Phani has obtained his Ph. D in Applied Chemical Technology, from highly reputed CSIR Laboratory "Indian Institute of Chemical Technology (IICT)", Hyderabad in the year 1994 and has spent 16 years in abroad working as PDF, Associate Professor, Senior R&D Engineer, Project Manager in various prestigious institutions like University of L'Aquila (Italy), Texas Instruments (Italy), University of New Hampshire (USA), Wright Patterson Air Force (Ohio), Center for Swiss Electronic and Microtechnology (Neuchatel, Switzerland), CNR (Council of National Research- Italy).

He has 33-year experience (in particular, 21 years in Nanotechnology and 15 years in abroad, 9 years in Pharma/Biomed) and to his credit published 273 international publications (h index 35) and 12 Indian Patents and 3 International patents and developed 59 nanotechnology-based products under different domains for industrial applications. He is a life member various organization and have good contacts in Indian and international industries. He has bagged 18 national awards and 3 international awards namely Best Impact factor award from IICT, Best Researcher award from University of L'Aquila, Best Innovator award from 64th Indian Pharmaceutical Congress, Pavan Nagpal Award from ICS, Best Nanotechnologist award from ISRO, from Indian Science Congress for Best Performer in Nanotechnology, etc.,

Now thereof the parties for valid consideration enter into this MOU:

1. OBJECTIVE:

To establish **Center for Innovative Nanoengineered Technologies (CINT)** at Department of Studies in Sericulture as nodal center of University of Mysore (CINT- UoM) to conduct research on Nanotechnology based materials for biomedical applications. Besides, it wishes to offer, training, research and internship for students, participation in national and international funded research projects, and R&D contract work with industries under **Make in India concept**.

2. APPROACH:

Plan to establish **Center for Innovative Nanoengineered Technologies (CINT-UoM)** in the Department of Studies in Sericulture Sciences, University of Mysore, Mysuru to carry out the following activities:


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- a. To create CINT-UoM in order to develop nanoscience-based technologies and prototype products required for Biotech Life Sciences and Biomedical sectors.
- b. Apply for grant at National and International funding agencies involving allied branches of basic sciences and potential Industrial partners to undertake research work and train the students.
- c. Invite various industries for process development/contract research at CINT-UoM using nanotechnology and also conduct industrial meet at CINT-UoM (UoM campus).
- d. Conduct internships in the campus/Industry/Government Institutions and select interested students for entrepreneurship and to train them towards start spin-off's.
- e. To conduct awareness program on Nanotechnology for all branches of Basic/Applied/Biomedical Sciences along with personality development, entrepreneurship and opportunities for higher studies / job both in India and Abroad.

3. ROLES AND RESPONSIBILITIES:

- a. **Financial Commitment:** There is **NO FINANCIAL COMMITMENT** from both UoM and NRT. However, UoM has to provide R&D lab space of 1,000 sqft in building to carry out identified and selected projects leading to products and provide space to conduct Nanotech training for students and researchers.
- b. **Manpower and Facility:** Faculty from different departments of Sciences / Management from UoM and students from different departments shall be selectively chosen based on their interest in R&D and passion for Technology Development to carry out identified and selected projects and to deliver the prototype / device form using infrastructure or facilities available at various departments and Vignan Bhavan.
- c. **Implementation:** To start with Creation of CINT-UoM at University of Mysore Campus, early understanding the impact and identification of prototype (product), product development, patent filing with clear commercialization, and issue of certificate for establishment of New entity for product production and marketing.
- d. **Evaluation of the Product:** A thorough evaluation of the prototype product and its properties will be carried out by all expertise in CINT-UoM and then if possible fill a patent and leading to commercialization.
- e. **Entrepreneurship development:** The developed prototype (product or device) shall be given to trained student to initiate new entity/company with small portion of share or royalty to Center (CINT-UoM). However, the required budget or seed money to launch the product in the form of **New Entity/company** shall be derived from TBI-DST, MSME and Government schemes etc.


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- f. **Revenue:** CINT-UoM will find the funding opportunities from Indian Government either by Technology Business Incubation or from potential investors offering the prototype product developed at CINT-UoM to new spin-off company, wherein CINT-UoM will have a share of 30% in the new company for its sustainability.
- g. **Research Projects:** It is planned to participate in various Indian Central/State government projects through academic institutions as a potential CINT partner as well as commercial developer (Potential Industrial partners) of the proposed/developed materials.
- By participating as partner in various projects along with potential academic institutions and industries, a separate budget will be allotted for CINT-UoM and NRT. Projects will be submitted through CINT-UoM. Faculty from different departments shall be chosen as principal investigator and Dr. A. Phani Ratna as one of the industrial partners through NRT as co-investigator. Once the taken-up project is successful and while needing for commercialization of the developed material the CINT-UoM and NRT come together to launce new spin-offs. At this stage a separate application to DST under TDB or TBI, MSME schemes, AWAKE, women empowerment schemes, or invitation to potential investor can be applied for more funding to commercialize the product.
- h. **Internship programs:** Internship programs in Nanotechnology will be offered for the final year students of Biological Sciences, Biotechnology and Biomedical Sciences. A nominal internship fee shall be collected from each student to perform the technology oriented internship training.

Advantages in undertaking internship at CINT-UoM:

- Hands on experience in nanotechnology (in the respective branches),
- Course covering concept, synthesis of nanomaterials, and characterization by different spectroscopic and microscopic techniques, practical industrial applications of nanomaterials,
- Personality development, communication skill development, presentation methods, public, speaking development, etc.,
- Publication in international journal (minimum 1)
- Exposure to National / International conference
- Opportunities in abroad Research institutes / Universities / Companies working in nanotechnology
- Developed technology can be spin-off for interested Students

4. PUBLICATIONS:

It is intended to be able to develop and publish original research papers on the outcomes and findings of the area of research. Both the parties along with any other contributing scientists would be the authors of such publications.


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5. CONFIDENTIALITY:

Both UoM and Nano RAM Technologies shall at all times maintain and keep secret and confidential any knowhow, figures, information, trade secrets, data or confidential documents in written/verbal form, obtained during the course of business relationship with Proprietorship which Employee has or may acquire from time to time relating to business of Proprietorship, to any person(s)/authority/organization /statutory body without written permission. The Nano RAM Technologies further agrees to take such steps and precautions as may be necessary to preserve and protect any Proprietary Information from publication, reproduction, communication or other unauthorized disclosure to the third parties.

6. ARBITRATION

Any dispute, difference or question arising out of, in relation to or incidental to this contract including any dispute as to the existence or validity hereof, shall be referred for arbitration to be conducted by Arbitration Tribunal wherein each party shall appoint one arbitrator from each side and they in turn will appoint the third Arbitrator. The language for proceedings shall be English. The place of Arbitration shall be at Mysore.

7. STATUTORY COMPLIANCES

Both UoM and Nano RAM Technologies shall be solely liable for Statutory Compliance in respect of all applicable laws of land which inter alia includes Central/State laws and Regulations/Rules made there under. Both UoM and Nano RAM Technologies shall be solely responsible for maintenance of records and filing of various forms/ returns prescribed under all applicable Central/State laws and Regulations/Rules made there under in respect of Employees/Workmen employed and business done by it.

8. GENERAL TERMS AND CONDITIONS

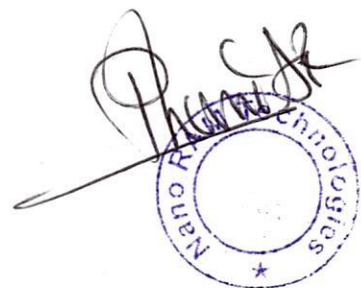
Either party shall be responsible for ensuring the following:

a. Responsibilities of Nano RAM Technologies:

- (ii) Nano RAM Technologies will submit the detailed report on the activities conduct every month.
- (iii) The delivery timelines mentioned in the proposal will have to be adhered by Nano RAM Technologies.
- (iv) Nano RAM Technologies is responsible for sharing the Quality Assurance Parameters.
- (v) Nano RAM Technologies will be responsible for work ethics at the premises at CINT-UoM- Mysore.

(vi)


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b. Responsibilities of CINT-UoM (Mysore):

- (i) The delivery timelines mentioned in the proposal shall be obliged by CINT-UoM.
- (ii) CINT-UoM has to provide 1000 sqft area of place for R&D activities,
- (iii) CINT-UoM has to provide infrastructure to conduct Nanotech Course (Auditorium with projector, screen, etc., on the day of conduction of the course)
- (iv) CINT-UoM is not supposed to replicate or copy the Nanotech course or Internship projects, etc.,

9. LIABILITY/DAMAGES

The sole responsibility of the performance of the Nano RAM Technologies rests with the Nano RAM Technologies and the Nano RAM Technologies shall be liable for any work done by its sub-contractors, agents, employees or officials. However, CINT-UoM reserves the right to claim damages and enforce rights on the sub – contractors solely or jointly with the Nano RAM Technologies but such enforcement will not absolve the Nano RAM Technologies from any liability.

10. Relationship between the Nano RAM Technologies and CINT-UoM

Nothing in the Contract shall be construed to imply a joint venture, principal-agent relationship or co-employment or joint employment between the Nano RAM Technologies and CINT-UoM. The Nano RAM Technologies, in furnishing services to CINT-UoM hereunder, is acting independently on its own.

Personnel engaged/employed by a party shall be deemed employees of that party and will not for any purpose be considered employees or agents of the other party. Except as may otherwise be provided in this Contract, each party shall be solely responsible for the supervision, daily direction, and control of its employees and payment of their salaries (including withholding of appropriate payroll taxes), workers' compensation, disability benefits, and the like.

11. CONFIDENTIALITY:

All information under the MOU shared between the parties shall be treated as confidential information and shall be subject to restrictions on disclosure other than for the purpose of this MOU. The confidentiality obligations shall survive even after the termination or expiration of this MOU. Confidential information shall not include:

- information that is available in public domain,
- information already known to the receiving party,
- information disclosed to the receiving party by a third party not under obligation of confidentiality,
- Information developed by the receiving party independent of the confidential information received under this MOU.


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12. INTELLECTUAL PROPERTY RIGHTS :

- a. "Intellectual Property" means the legal rights relating to inventions, patent applications, patents, copyrights, trademarks, mask works, trade secrets, and any other legally protectable information, including computer software, first made or generated by such investors .
- b. The "Intellectual Property Rights (IPR)" generated during the project will exclusively lie with the Academia. - University of Mysore and Industry partner - NRT. NRT would have the Go To Market rights of this IPR with an appropriate royalty agreement being in place with academia.
- c. Patent Prosecution and Expenses: The filing, prosecution, defense and maintenance of all Patents for the Inventions will be conducted and controlled individually in the name of University of Mysore (Institute), acting reasonably and in good faith. Whereas, the industry partner will provide support to such defense effort.
- d. Background Intellectual Property: Any of the party possesses rights in background intellectual property, that is, intellectual property not otherwise subjected to this MOU, which would be useful or essential to the practice or commercialization of the results of this MOU, should be disclosed. Except to the limited extent required to perform a party's obligations under this MOU, neither party receives any right, title, or interest in or to any Research Materials provided to it by the other party or any technology, works or inventions of the other party that are not Research Program Inventions, or any patent, copyright, trade secret or other proprietary rights in any of the foregoing.
- e. Maintaining the Laboratory Notes: Each party agrees that research efforts will be well documented in the form a laboratory notes with accurate data disclosed for each experiments performed therein, during the course of this MOU.
- f. In the event of commercialization of the technology by the University of Mysore, NRT will have the first right of refusal.

13. TERMS AND TERMINATION:

This MOU shall be valid for a period of **Three (03)** years from the effective date and can be terminated by a notice of three months by either party. The termination of this MOU shall not affect any IP rights accrued and related obligations arising under this MOU. As per the need, the MOU will be revised for further duration with the same terms and conditions or mutually agreeable modifications.


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14. INDEMNIFICATION:

Neither party shall be held responsible for the indemnification of their respective obligations under this MOU due to the exigency of one or more of the force majeure events such as but not limited to acts of God, War, Flood, Earthquakes, Strikes, Lockouts beyond the control of the party claiming force majeure, Epidemics, Riots, Civil Commotions etc. provided on the occurrence and cessation of any such event the party affected thereby shall give a notice in writing to the other party within one month of such occurrence or cessation. If the force majeure conditions continue beyond six months, the parties shall jointly decide about the future course of action.

Signature

The Registrar
(University of Mysore)

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University of Mysore
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Signature

Managing Director
(Nano Research for Advanced
Materials (RAM) Technologies)

Circular stamp: Nano Research for Advanced Materials (RAM) Technologies

Witness

CHA. B. MANJUNATHA
CHAIRMAN
DoS in Sericulture Science
University of Mysore
Manasagangotri
MYSURU-570005

Witness

(A. ANURADHA)