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**Umbrella Memorandum of Understanding
Between**

ICAR-Central Institute of Post-Harvest Engineering and Technology (ICAR-CIPHET), Ludhiana, Punjab

and

**Sant Longowal Institute of Engineering and Technology, Longowal- 148106
(Deemed to be University)**

District Sangrur, Punjab

for facilitating Students' Training/Postgraduate Research



This Memorandum of Understanding (hereinafter referred to as MoU) is made on 9th day of the month of February in the year 2022 by and between the **ICAR-Central Institute of Post-Harvest Engineering and Technology (ICAR-CIPHET), Ludhiana** having its Head Office at Ludhiana [hereinafter called "**ICAR-CIPHET, Ludhiana**"/First party], a constituent Research Institution of the Indian Council of Agricultural Research, Krishi Bhavan, New Delhi-110 001 on the ONE PART and the **Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur** having its headquarters at Longowal [hereinafter called "**SLIET, Longowal**"/Second party] on the OTHER PART (who for the purpose of this MoU are hereinafter collectively referred to as the parties).

The parties, having discussed fields of common research interests and allied activities between the two institutions, have decided to enter into long-term collaboration for promotion of **students' training and quality postgraduate research in cutting edge areas** in accordance with the provisions contained in the Guidelines issued by Indian Council of Agricultural Research (ICAR) vide Letter No. 2-8/2012- HRD dated 11th December, 2012 or as revised from time to time.

WHEREAS the "First Party" is a nodal institute to undertake lead researches in the area of the **post-harvest engineering and technology appropriate to agricultural production catchment and agro-industries**, i.e. research for solving problems and identifying technologies related to post-harvest loss assessment and prevention, processing, value addition and storage of agricultural, horticultural, livestock and aquaculture produce targeted to achieve food safety and quality assurance; human resource and entrepreneurship development in post-harvest engineering and technology within five divisions namely Agricultural Structure and Environment Control Division, Automation and Sensor Technology Division, Food Grain and Oilseed Division, Horticultural Crop Processing Division and Transfer of Technology Division, AND WHEREAS the "Second Party", established vide F.No.9-42/2001-U.3 dated 10.04.2007 by Govt. of India vide UGC Act, 1956 of U.3(A) Section and recognized by University Grants Commission at its Department of Higher Education, MHRD, New Delhi, is involved in teaching & research in the areas of **Food Engineering & Technology; Electrical & Instrumentation Engineering; Electronics & Communication Engineering; Mechanical Engineering; Computer Science & Engineering; Chemical Engineering; and Basic Sciences including Physics, Chemistry, Mathematics; and Management**, AND WHEREAS it has been considered expedient to agree in writing to participate jointly in the projects requiring expertise and logistics from both the parties.

Article 1. Scope

1.1 The Second party will recognize the First party as an Institute for conducting research related to the thesis requirement of the research students for **M. Sc/ M. Tech and Ph. D.**

Nachiket

(Signature of First Party)

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निदेशक/Director
भाकअनुप-केंद्रीय कटाई उपरान्त अभियांत्रिकी
एवं प्रौद्योगिकी संस्थान, लुधियाना-141004 (भारत)
ICAR-Central Institute of Post-Harvest Engineering
and Technology, Ludhiana-141004 (India)

[Signature]

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Director/निदेशक
Sant Longowal Institute of Engg. & Tech.
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The Second party will recognize Scientists of the ICAR-CIPHET, Ludhiana as recommended by its Director in accordance with the University rules and regulations for guiding students working for the said degree.

- 1.2 Operational details of research effort and collaboration will be made in common research programmes and/or projects restricted to specific mandated domain within the approved disciplines/divisions.
- 1.3 Research instrumentation facility and library facilities available with the First party and the Second party will be made available to the faculty and research scholars. However, the costs of specific consumables will be borne by the respective organizations.
- 1.4 There shall be an exchange of students for academic, research and training purposes. Accommodation in the Hostel shall be arranged, wherever possible, as per extant rates. The duration of exchange visits will be determined by mutual consent between both the parties.

Article 2. Management

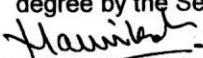
- 2.1 Director of the First party and the Director of the Second party will be responsible to work out operational details of co-operation between the two organizations and ensure proper and effective implementation of this MoU.

Article 3. Exchange of Information

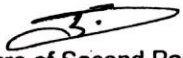
- 3.1. The term "information" includes scientific or technical data, results and/or methods of investigation, and other information intended to be provided, exchanged, or arising under project descriptions entered pursuant to this MoU.
- 3.2. The parties support the widest possible dissemination of information. Each party in joint projects shall be given the right to use, disclose, publish or disseminate such information for any and all purposes.

Article 4. General Provisions

- 4.1 It is understood that the First party and the Second party subscribe to the principle of equal opportunity and do not discriminate on the basis of race, sex, age, caste or religion. Both the Institutions shall abide by these principles in the administration of this agreement and neither party shall impose criteria for exchange of scholars or students, which violate principles of non-discrimination.
- 4.2 Both parties understand that all financial agreements will have to be negotiated separately and will depend on the availability of funds
- 4.3 Both parties acknowledge that exchange of students from one party to the other shall be subject to the availability of funds and shall comply with the regulations and policies of the First party and the Second party.
- 4.4 Any research publications arising will be jointly published in accordance with the provisions laid out in Item 3.2.1C* of the Guidelines for the students to conduct research for their degree programme as trainees at ICAR institutions as notified vide Letter No. 2-8/2012-HRD dated 11th December, 2012 or revised guidelines, if any, as may be issued from time to time.
- 4.5 A copy of the thesis/dissertation will be provided to the First Party after the award of the degree by the Second party.


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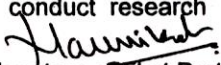
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- 4.6 All questions related to this MoU arising during its term will be settled by the parties by mutual agreement. Disagreements at the operating level shall be forwarded to respective higher officials for appropriate resolution failing which an arbitrator of mutual acceptance may be identified for the settlement of dispute, if any.
- 4.7 All questions not foreseen related to this MoU will be handled by the parties by mutual agreement.
- 4.8 Nothing in this MoU is intended to affect other cooperation or collaborations between the parties.

Article 5. Intellectual Property Rights

- 5.1 The Second party will be expected to ensure protection of the Intellectual Property Rights generated or likely to be generated during the student's research work. The ICAR as the first applicant (for its institute) and the Second party shall be the joint applicants for IPRs and the students and involved scientific staff shall be included as the inventor/breeder/author. The 'ICAR Guidelines for Intellectual Property Management and Technology Transfer/Commercialization' as amended from time to time shall be the reference for exploitation of the generated intellectual property, whose management and benefits sharing shall be mutually decided in each case.

Article 6. Admission and Fees

- 6.1 All those who wish to register as trainees or for Master/Doctoral programme under this MoU must apply for admission at the Second party. The allocation of Major Guide/Advisor would be finalized before the registration and will be governed by the provisions laid out in Items 3.2.1A and 3.2.2A of the Guidelines* for the students to conduct research for their degree programmes as trainees at ICAR institutions as notified vide Letter No. 2-8/2012-HRD dated 11th December, 2012 or revised Guidelines, if any, as may be issued from time to time, for the students from within NARS and outside NARS, respectively.
- 6.2 Admission of the students and the award of degrees for different programmes will be the responsibility of the Second party as per the rules and regulations.
- 6.3 Allotment of the students at the First party will be done by the approval of Director of the First party and Competent Authority of the Institution of the Second party.
- 6.4 The First party would have the right to screen the student's eligibility for admission based on their academic performance.
- 6.5 The PME Cell of the First party in consultation with the representative of the Second party shall decide the location and sharing quantum of research work with the approval of competent authority of first party.
- 6.6 The number of student(s) at any particular time will be subjected to the availability of research facilities and scientists' time to guide thesis research at the First party institution.
- 6.7 Any student(s) admitted to the First party for training/postgraduate research, if found violating the rules and regulations laid down by the First party or indulge in such activities that amount to tarnishing the image of the Institute, or cause damage to the property, the registration of such student(s) would be summarily terminated. The Second party will not complete the formalities of issuing the certificates to such students until they compensate the losses to the First party.
- 6.8 Fees will be charged from the students by the First party as per Guidelines for the students to conduct research for their degree programmes as trainees at ICAR institutions


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vide Letter No. 2-8/2012-HRD dated 11th December, 2012 or revised Guidelines, if any, as may be issued from time to time according to current guidelines. No fee may be charged by the First party from the students registered with AU/DU within NARS. However a student registered with a Second party, outside NARS, will deposit fee of Rs. 10,000/- for training duration of 3 months (not leading to a degree/dissertation) and Rs. 30,000/- per semester (six months) for training, research, dissertation exceeding three months. Any change in fee structure by ICAR will be applicable from the date of revision and shall be charged by the First party. This clause is not applicable to the employee of the first party registered as the student with the second party.

Article 7. Entry into effect, modification and termination

- 7.1. This MoU shall become effective on the date it is signed by the parties and shall be valid for five years. Thereafter, it shall be automatically renewed for a period of five years unless either party served notice on the other of its intention to terminate it, in which event, the MoU shall stand terminated at the end of one calendar month from the date of issue of such a notice. But the termination of this MoU shall not affect the validity or duration of specific collaborative programmes already being undertaken thereunder, unless decided otherwise by the parties by mutual consent. This MoU may be amended by mutual written agreement and may be terminated at any time by either party upon written notification signed by the competent authority of the party initiating termination. Such notification must be given to the other party at least six months in advance from the effective date of termination.
- 7.2. All joint activities not completed at the expiration or termination of the MoU may be continued until their completion under the terms of this MoU.

***8 SPECIFIC**

Based upon student's parent institution, the guidelines may be categorised into two heads as under:

***8. 1. Within National Agricultural Research System (AU/DU to ICAR Institute)**

A. Advisor/Guide

- (i) The criterion for allocation of Major Guide/Advisor will primarily be governed by the intellectual input and time duration devoted for carrying out the research work at a particular institution. It may be decided by mutual consent, keeping in view the MOU signed between partnering institutions. If the major guide is from ICAR Institute, the co-guide will be from partnering university and vice-versa.
- (ii) The ICAR scientists pursuing their PhD degrees after completing their PhD course work at ICAR-DUs may be allowed to do their research work at the institute where they are posted, in view of shortage of scientists/faculty.

B. Fee Structure

If a student registered with AU/DU intends to carry out the research work at ICAR Institute, latter may not charge any fee from the registering institution/student, except the hostel accommodation charges, etc. However, if a student registers with AU/DU after qualifying through competitive mode of ICAR's All India Entrance Examination for Admission to

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Master's/PhD and is awarded fellowship for pursuing Master's or Doctoral degree programme by any sponsoring institution [e.g. ICAR-JRF(PGS)/ICAR-SRF(PGS)/CSIR-UGC-JRF/CSIRSRF], the contingency grant awarded to the student may be transferred to the institution where major part of the research work would be carried out and regulated by the provisions contained in the guidelines of sponsoring institution.

C. Publications

- (i) The student would invariably be the senior author for the publications arising out of the research work conducted at the AU/DU/Institutes. The names of additional co-authors, depending upon their contribution in the research work, may be decided by mutual consent between the student and Major Guide/Advisor.
- (ii) The partnering institutions may ensure that the student submits at least one paper from Master's thesis and two papers from Ph.D. thesis (out of which at least one research paper should be published in a journal with NAAS rating of 6.0 or more) before thesis submission in order to prevent students leaving the institute(s) without any research publication from the thesis.

D. Intellectual Property Rights (IPRs)

The student will be expected to protect the Intellectual Property Rights generated or likely to be generated during his/her research work. The IPRs shall rest with the institution where the major part of the research work was carried out by the student. In the event of equal amount of work being carried out at both the AU/DU and ICAR Institute, patents/protections/knowledge generated will be shared in proportion as per the 'ICAR Guidelines for Intellectual Property Management and Technology Transfer/Commercialization' as amended from time to time.

*3.2.2 Outside National Agricultural Research System (Central / State Govt./ Public Sector funded institutions / State Universities / PSU / Autonomous bodies / Statutory Corporations / Private Universities or institutions)

A. Advisor/Guide

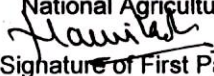
- i. The requirements for Major Advisor/Guide shall be the same as per para 3.2.1 (i) above for students in National Agricultural Research System (AU/DU to ICAR Institute).
- ii. The objective(s) for research work for a student coming from such an institution should be exclusively different as far as possible.

B. Fee Structure

The students shall be uniformly charged a fee of Rs. 20,000/- for training/ research/ dissertation up to duration of 3 months and @ Rs. 30,000/- per semester for the work exceeding three months. The fee structure is to be reviewed periodically after two years by the AU/DU or the ICAR Institute, as the case may be. However, the students may be charged a fee of Rs. 10,000/- for training duration of three months not leading to a dissertation/ degree. This clause is not applicable to the employee of the first party registered as the student with the second party.

C. Publications

The requirements for Publications shall be the same as per para 3.2.1(C) above for students in National Agricultural Research System (AU/DU to ICAR).


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Director/निदेशक

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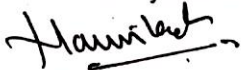
D. Intellectual Property Rights (IPRs)

A separate clause regarding management of IPR issues will be incorporated in the MOU signed between partnering AU/ ICAR Institute, exclusively for the students coming from Central/State Govt/Public Sector funded institutions/ PSU/Autonomous bodies/Statutory Corporations.


Apart from above, this MOU also includes:

1. All disciplines to which admission are made in the post-graduate programme (i.e. Masters and Ph. D) by the university shall be open for collaboration under the MoU provided the proposed research aspect is covered in the mandate of the ICAR-CIPHET.
2. The student shall complete the course work in the university, as per approved academic programme
3. If the master and /or Ph. D students' research work requires **minor collaborative inputs** from the ICAR-CIPHET, in terms of scientific guidance, laboratory facility for selected parameter studies, a **Co-Major Advisor** shall be from ICAR-CIPHET, Ludhiana.
4. If the Master and/or Ph.D students' research work requires **major inputs** from the ICAR-CIPHET, in terms of scientific guidance including preparation of work plan, laboratory facility for the work, a **Major Advisor** shall be from ICAR-CIPHET and co-major advisor shall be from SLIET, Longowal.
5. For Master (PG)/Ph.D students working at ICAR-CIPHET, research work shall be decided in consultation with major and/or co-major advisor (as per case, S. No 3 or 4) at ICAR-CIPHET. The necessary costly chemicals/ consumables, if any required, shall be shared /provided by the ICAR-CIPHET/University from the research project/contingency of the student, if available.
6. The collaborative ICAR-CIPHET Scientist shall be having Masters (in Engineering) and Ph. D (in other discipline) qualifications and fulfilling other University requirements for guiding of Master and/or Ph. D research students.
7. Identified ICAR-CIPHET faculty as **Co-Major or Major Guide** will look after the research work, day to day conduct and progress of the student during his/her stay and also supervision of experiments at ICAR-CIPHET, Ludhiana/Abohar.
8. Both the collaborating institutions shall maintain confidentiality on the technique and results of research work.
9. Any new developed technology will be taken up for commercialization or adoption under the supervision of Director, ICAR-CIPHET (in case major work is done at ICAR-CIPHET) and VC or concerned authority nominated (in case major work is done at University) with assistance/ cooperation of both the parties.
10. The respective institutes will bear the expenses of TA/DA of the Teachers/Scientists visiting Ludhiana/ Longowal or any other place and the students will bear their own expenses.
11. Development and implementation of collaborative teaching research and extension projects in the identified areas and methodology to be used as mutually agreed upon, subject to IPR Intellectual Property Rights (IPR) clause in Article IV.

This MoU has been executed in two originals, one of which has been retained by the First party and the other by the Second party.


(Signature of First Party)

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


The Director
ICAR-Central Institute of Post-Harvest
Engineering and Technology
P.O-PAU, Ludhiana-141004
Punjab

The Director
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Technology,
Longowal, Sangrur-148106,
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Email: director.ciphet@icar.gov.in
Date : 09/02/2022


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Signature with Seal


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Tel: 01672-253100
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Date : 09/02/2022

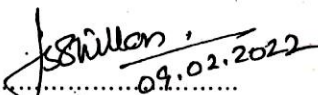
Director/निदेशक
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Witness 1  09/02/22
Dr. Sandeep Mann
PS-3 OIC PME cell

Witness 2  09/02/2022

Dr. D. N. Yadav
Head, TGT, IAR-CIPHET.

Witness 1  09.02.2022
Dr. J. S. Dhillon
Dean (Academics)

Witness 2  9/2/2022

Dr. Navdeep Jindal
Associate Dean (Acad)