



### 3.7.1.1: Number of functional MoUs with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years

#### Index - 2019-2020

Sr.No.	Year of signing MoU	Name of the organization with whom MOU/Collaboration being signed	Duration	Purpose of MOU/Collaboration	List the actual activities under each MOU year-wise	Page No.
1.	2019-2020	Department of Science, Technology & Environment, Govt. of Punjab, Chandigarh	Five years	To organize research and Innovation Program	1. Training on value addition to summer crops 2. Awareness campaign on national integration 3. Swachhta pakhwara at village Nussi 4. Entrepreneurship program at Karari 5. Entrepreneurship program at Nussi 6. Entrepreneurship program at Sarmastpur	<u>1</u>
2.	2019-2020	ICAR - Indian Institute of Wheat & Barley Research, Karnal	Five years	For Collaboration for Post Graduate Research	Student visit at ICAR-IIW&BR Karnal	<u>4</u>



3.	2019-2020	Punjab Energy Development Agency, Chandigarh	Perpetua 1	Research & Development Projects on Energy Conservation & Energy Efficiency under "State Energy Efficiency Reseach & Outreach Program" of Bureau of Energy Efficiency, Ministry of Power, Government of India	1. Student visit to Punjab Energy Development Agency, Chandigarh 2. PEDA training programme on energy conservation	<u>7</u>
4.	2019-2020	ICAR - Central Soil Salinity Research Institute, Karnal	Five years	For Collaboration for Post Graduate Research	Student visit at CSSRI Karnal	<u>12</u>
5.	2019-2020	Department of Science, Technology & Environment, Govt. of Punjab, Chandigarh	Five years	To develop model villages in the vicinity of DAV University	Model development of village Sangowal	<u>16</u>
6.	2019-20	UNIVERSITY OF KASHMIR	Perpetua 1	Research Collaboration	Publication	<u>19</u>
7.	2019-20	MIT-ADT University	Perpetua 1	Research Collaboration	Publication	<u>20</u>
8.	2019-20	Jamia Millia Islamia	Perpetua 1	Research Collaboration	Publication	<u>21</u>



Department of Science, Technology &  
Environment, Government of Punjab



DAV University, Jalandhar

## Memorandum of Understanding

This Memorandum of Understanding (MoU) is entered into on the 16 day of October, 2019 at Chandigarh.

### Between

The Department of Science, Technology & Environment, Government of Punjab, Chandigarh (hereinunder referred to as 'DSTE-GoP' which expression shall where the context so admits include its successors and permitted assigns) of one part.

### And

DAV University, Jalandhar (hereinafter referred to as 'DAV University' which expression shall where the context so admits include its successors and permitted assigns) of the other part.

Whereas, the Parties recognize the need to jointly address the issues of state importance pertaining to the environment, climate change and public health to achieve the overall goals and objectives of newly launched Mission Tandrust Punjab 2.0.

And whereas, the Parties recognize the need for promoting Research and Innovation (R&I) ecosystem in the State and particularly using Research and Innovation to enhance competitiveness, boost economic growth and create quality jobs.

And whereas, the Parties have expressed the desire to work together to promote collaborative programmes to make Punjab the R&I Hub and the healthiest State with healthy environment so as to enhance the adaptive capacity and resilience of the State towards emerging challenges.

In witness whereof the Parties now agree to the following :

**ATTESTED**

**Registrar**  
**DAV University, Jalandhar**

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**Article-1 : Broad areas of Cooperation**

1. The DSTE-GoP and DAV University, Jalandhar have identified the following areas of mutual interest for cooperation:

- (i). Partnership to undertake state specific collaborative research & innovative programs in the areas of Environment, Public Health and Life Sciences.
- (ii). To develop and promote model village in terms of air, water & soil quality, waste management, rain harvesting, zero burning of paddy straw, etc. and to replicate the initiative in other villages.
- (iii). Jointly organize Innovation Summits/Conclaves, capacity building & awareness programmes to promote research and innovation in the State.
- (iv). Any other area of cooperation that may be mutually agreed upon.

2. The DSTE-GoP and DAV University, Jalandhar have jointly identified above said areas for both short and long-term collaboration and will continue to identify additional actions, as required from time to time. The scope of work, financial implications, source of funds, terms of reference & time lines would be determined and mutually agreed to, on a case to case basis.

3. Both Parties will jointly identify financial resources and facilitate implementation of mutually identified activities.

4. Without prejudice to their endeavours to work together, both the Parties shall be free to work independently with other organizations as well, in the areas of mutual cooperation as identified in Para 1 above.

5. Neither Party shall incur any liability, financial or otherwise, on behalf of the other party, without prior written consent of the other Party.

6. The DSTE-GoP and DAV University, Jalandhar may decide mutually all other matters and activities that have not been specially mentioned or provided in the MoU.

**Article-2 : Validity**

This MoU shall be valid for FIVE years from the date of its execution. However, agreements concluded under this MoU shall be valid till the end of contracting obligations and responsibilities of the concerned Parties. The validity of this MoU can be further extended with the mutual consent of the Parties in writing.

**Article-3 : Termination**

This MoU can be terminated by either party by serving one month notice in writing, without assigning any reason, subject to completion of assignments in hand.



**ATTESTED**



**Registrar  
DAV University, Jalandhar**

**Article-4 : Governing Law**

Laws of India shall govern the MoU.

**Article -5 : Arbitration**

That the disputes, if any, shall be subject to arbitration if mutual consultations between the parties i.e. DAV University, Jalandhar and Department of Science, Technology & Environment, Government of Punjab, Chandigarh, fail to resolve the issue. The arbitration shall be strictly in accordance with the Arbitration Act as amended from time to time. That the jurisdiction in the event of disputes arising out of the terms of the agreement shall be Jalandhar/Chandigarh court.

In witness thereof, the undersigned duly authorized thereto have signed this Memorandum of Understanding.

**R.K. Verma, IAS**  
Principal Secretary  
Department of Science, Technology  
Environment, Govt. of Punjab

**Desh Bandhu Gupta**  
Vice-Chancellor  
DAV University, Jalandhar

**Witnesses:**

1.

Executive Director,  
Punjab State Council for  
Science & Technology.

2.

Dr. Jasbir Rishi  
Dean Student welfare  
DAV University  
Jalandhar.

**ATTESTED**

**Registrar**  
**DAV University, Jalandhar**



ICAR-Indian Institute of Wheat &  
Barley Research, Karnal (Haryana)



DAV University, Jalandhar

**A MEMORANDUM OF UNDERSTANDING FOR COLLABORATION FOR POST-GRADUATE RESEARCH**

**Between**

**ICAR-INDIAN INSTITUTE OF WHEAT AND BARLEY RESEARCH (Karnal, Haryana)**

**And**

**DAV UNIVERSITY, (Jalandhar, Punjab)**

ICAR-Indian Institute of Wheat and Barley Research, Karnal - 132001, Haryana, India under the aegis of Indian Council of Agricultural Research, is an apex body in the realm of wheat research, development and training which is more particularly concerned with quality and production. The organisation was started in 1978 as a Directorate and shifted to Karnal in 1990 and in the last 3 decades, it has earned national and international recognition for its outstanding contribution in the area of research on various aspects including quality of wheat for end product making and barley for industrial application in malting/brewing. All interdisciplinary research work on Agronomy, Breeding, Biotechnology, Seed Health, Soil and water utilization, grain Quality aspects of wheat, Bioinformatics, Economics, Extension, Computer applications etc., on wheat and barley are being undertaken as per mandate of the institute with the competent faculty. Trainings are also imparted on these aspects at national level.

At present the centre has a scientific staff /positions with specializations in Agronomy, Soil sciences, Plant Breeding, Entomology, Plant Pathology, Wheat Physiology, Agricultural Economics, Agricultural Extension, Statistics, Biochemistry, Biotechnology and Seed Production etc. These scientists are well trained in their field in India and abroad. There are several prestigious international collaborative projects ongoing at the ICAR-IIWBR. The centre has well-equipped laboratories having most modern scientific instruments/facilities. The institute has excellent physical and technical facility for doing research on wheat and barley production. It is, therefore, proposed to extend collaborative efforts with DAV University (Jalandhar, Punjab) which is having adequate facilities in post graduate teaching and research.

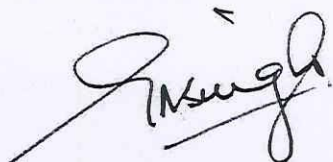
Understanding the scope of participation in this program, the DAV-U, hereafter refer to as the collaborating University and the ICAR-Indian Institute of Wheat and Barley Research, Karnal hereafter refer to as ICAR-

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**Registrar**  
**DAV University, Jalandhar**

IIWBR of the Indian Council of Agricultural Research, sign the memorandum of understanding (MOU) for jointly undertaking the post-graduate education/research program, in the field of wheat and barley quality and production with the following terms and conditions and agree to carry out there respective responsibilities as detailed in the MOU.

#### Terms and conditions

1. The following terms and conditions will be applicable to both the collaborating University and ICAR-IIWBR, as specified in the sub clauses below:
  - 1.1 The yearly programme of admission, number of seats in each subject, PG teaching, student's accommodation in the hostels, area of research etc. will be the responsibility of the collaborating University and shall be as per the university rules & policies.
  - 1.2 The degree will be awarded by the DAV-U.
  - 1.3 If the major advisor of the PG student feels that Faculty or facilities of the ICAR-IIWBR may be helpful in the student's research, the collaboration of ICAR-IIWBR may be sought.
  - 1.4 Any scientist of ICAR-IIWBR fulfilling the qualifications/requirements of PG teachers of DAV-U, on the recommendation of the Director, ICAR-IIWBR may be appointed as major / co-major advisor in the advisory committee of the student as per mutual agreement with the competent authority of the University depending upon the topic of research for thesis and time sharing. ICAR-IIWBR will permit the concerned scientist to act as major / co-major advisor (Co-Guide) of the student.
  - 1.5 The nature of the research undertaken by the student(s) will be preferably related to the wheat and barley interdisciplinary research work on Agronomy, Breeding, Biotechnology, Seed Health, Soil and water utilization, Quality aspects of wheat, Bioinformatics, Agricultural Economics, Agricultural Extension, Computer applications etc. and will be agreed to by the student's advisory committee and concerned competent authority of the university.
  - 1.6 Such student will be allowed to utilize the scientific material and physical facilities of ICAR-IIWBR with proper approval of the concerned authorities.
  - 1.7 The ICAR-IIWBR would also provide facilities required for research by any other Faculty Member/student of above mentioned disciplines (Clause 1.5) on reciprocal basis provided it does not hinder the natural functioning of the University.
  - 1.8 The help rendered by ICAR-IIWBR will be properly acknowledged in the thesis and any research paper/other publication/award emerging out of the research work carried out by the students in collaboration with ICAR-IIWBR will be jointly shared. The student will be expected to protect the Intellectual Property Rights (IPRs) generated or likely to be generated during his/her research work. The IPRs shall rest with the institution where the major part of the



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DAV University, Jalandhar

research work is carried out by the student. In the event of equal amount of work being carried out at both ICAR-IIWBR and the university, patents/protections/knowledge generated will be shared in proportion as per mutually settled terms by ICAR-IIWBR and DAV-U.

1.9 The ICAR-IIWBR/Collaborating University will abide by the rules and regulations of the respective organizations.

1.10 All questions/issues related to this MoU shall be settled amicably by both parties and disagreement if any shall be forwarded for settlement by arbitrator of mutual acceptance.

Executed this 28<sup>th</sup> day of November, 2019 for a period of 5 years, and further extendable with the consent of both the parties.

In Witness Whereof, the authorized representatives of both parties have hereunto affix their signature below:

For the

ICAR-Indian Institute of Wheat and Barley Research



Director **डॉ. जी.पी सिंह/Dr. G.P. Singh**

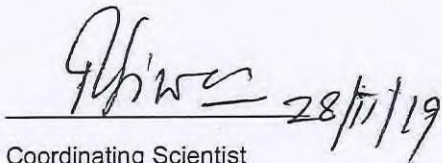
निदेशक/Director

भा.कृ.अनु.प्र.-भारतीय गेहूँ एवं जौ अनुसंधान संस्थान  
ICAR-Indian Institute of Wheat & Barley Research  
करनाल-132001(भारत)/KARNAL-132001 (India)



Vice Chancellor  
DAV UNIVERSITY  
JALANDHAR

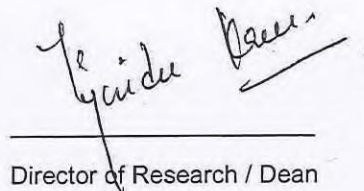
Signed in the presence of




Coordinating Scientist

ICAR-Indian Institute of Wheat and Barley Research

Karnal. Haryana-132 001



Director of Research / Dean



Registrar

Signed in the presence of

**ATTESTED**  
  
**Registrar**  
DAV University, Jalandhar



**MEMORANDUM OF UNDERSTANDING**

**BETWEEN**



**PUNJAB ENERGY DEVELOPMENT AGENCY**

**&**



**DAV University, Jalandhar**

**FOR**

**Research & Development Projects on Energy Conservation & Energy Efficiency under "State Energy Efficiency Research & Outreach Program" of Bureau of Energy Efficiency, Ministry of Power, Government of India.**

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**ATTESTED**

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**Registrar  
DAV University, Jalandhar**

This MEMORANDUM OF UNDERSTANDING concluded on 4<sup>th</sup> day of December, 2019 between Punjab Energy Development Agency, Sector-33D, Chandigarh herein thereafter referred to as PEDA which expression shall where the context admits; include its successors or assignees represented by its Chief Executive Officer as the First Party

&

DAV University, Jalandhar herein thereafter referred as DAV University which expression shall where the context admits; include its successors or assignees represented by its Vice Chancellor as the Second Party

#### **OBJECTIVES OF MOU**

Bureau of Energy Efficiency (BEE) is the central agency for implementation of Energy Conservation Act, 2001 established under the Ministry of Power, Govt. of India. Punjab Energy Development Agency (PEDA) has been declared as the State Designated Agency to coordinate, regulate and enforce the Energy Conservation Act, 2001 in the state of Punjab under the guidelines of BEE. BEE has desired that PEDA may collaborate with the Educational / Research Institutes and Laboratories to encourage innovative projects and research in the field of energy efficiency and energy conservation under State Energy Efficiency Research and Outreach program.

The mission objective of this Memorandum of Understanding is to work on research on innovative projects in the field of energy efficiency / energy conservation as follows:

- Clean and energy efficient innovation technologies in Building Energy Efficiency, Energy Modeling and Simulation, Monitoring and Benchmarking of buildings, Net Zero energy buildings, Energy Efficient Building materials, Advanced HVAC and lighting technologies etc.
- Research and Development of clean and energy efficient technologies in Industries (MSMEs & Large), technology up-gradation to reduce/ optimize auxiliary power consumption and zero impact manufacturing.

MRB

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**ATTESTED**  
  
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- Energy efficient equipment's/ appliances monitoring, testing and evaluation/ certification.
- Policy studies and initiatives on energy conservation, energy management and its implementation in various thrust areas i.e. domestic, commercial, agricultural, industrial, etc.
- To bridge the gap between theory and field through technical inputs at onsite locations.

**It is further agreed;**

- The institute will submit R&D proposal on energy conservation & energy efficiency to PEDDA.
- The proposal should be submitted in the prescribed formats along with necessary documents as per the guidelines of Bureau of Energy Efficiency (BEE), Ministry of Power (MoP), Govt. of India (GOI), New Delhi.
- After reviewing, PEDDA will submit the proposal to Bureau of Energy Efficiency for their comments and approval.
- Only upon getting the approval from BEE, the institute / researcher shall be permitted to carry out the research under the program on such terms and conditions laid down by BEE in this regard.
- The financial assistance/ funding of the proposal outlay shall be provided by BEE to PEDDA which shall further be disbursed to the institute as per guidelines as well as terms & conditions of BEE.
- The role of institute is:
  - To publicize the program locally and ensure adequate participation.
  - To provide strategic research support, guidance and direction for the development of R&D projects.
  - Designing, Testing, Performance evaluation and analysis of different technologies.
  - To provide experts/ specialists/ faculties technical material and technical assistance in the concerned areas of technology.

*meb*

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**ATTESTED**  
  
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**DAV University, Jalandhar**

- To facilitate PEDAs interaction through involvement of researcher through Educational / Research Institutes and Laboratories.
- Joint hosting of Conferences, Training Courses/ Workshops.

#### COMMUNICATION

Any communication or notice or intimation shall be addressed to signatories and such a communication sent by e-mail, tele-fax, registered/ air-mail shall be deemed to be sufficient. It is the responsibility of each organization that it keeps the other party updated of its contacts.

#### RESPONSIBILITIES

- PEDAs will be the facilitating agency only. There will be no responsibilities / financial liability attributed to PEDAs/ Punjab Govt under this MoU.
- The research institute shall be bound to meet with / fulfil all the conditions laid down by BEE under the program.
- Entering into this MoU doesn't confer any rights upon researcher / institute or approval in any manner to carry out the research under this program, as the same is subject to the approval of BEE, MoP, GOI.
- PEDAs will not be liable to provide any financial support to the researcher / institute as the approval for R & D project has to be rendered by BEE, MoP, GOI.

#### JURISDICTION

In case of any disputes arises between the parties with regard to terms and conditions of this MoU or relating to the interpretation hereof, the same shall be referred to the Arbitration of a Sole Arbitrator in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and rules made there under including any modifications, amendments and further enactments thereto. The venue for the arbitration will be at Chandigarh. The decision of the Arbitrator shall be final and binding on the parties. Subject to the arbitration clause above any dispute shall be referred to the exclusive jurisdiction of courts of Chandigarh.

*msb*

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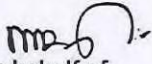
**ATTESTED**  
  
**Registrar**  
**DAV University, Jalandhar**


**NON-EXCLUSIVITY**

The relationship of the parties under this MOU shall be non-exclusive and both parties including their affiliates, subsidiaries and divisions, are free to pursue other related agreements or collaborations of any kind with mutual consent with or without limiting each party's right to collaborate on that subject.


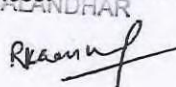
**OTHER TERMS AND TERMINATION**

- a. This MOU shall remain valid, unless until terminated by either of the parties by serving upon 30 days prior written notice to the other party.
- b. However, such earlier termination of this MOU, whether mutual or unilateral, shall not have retrospective effect on any ongoing research / project activities or on any agreement entered under this MOU, till the completion of the ongoing research(s) / project (s).
- c. In the event of termination of this MOU, assets, if any, created from the funding of the BEE/PEDA, shall be property of BEE/PEDA and institute shall hand over the created assets to authorized representative of PEDA within 30 days from the termination of this MOU / completion of ongoing activities as per their schedule.
- d. The institute shall maintain stock registers for consumables / non-consumable stores under the activities funded under this MOU.

  
For and on behalf of  
Punjab Energy Development Agency,  
Chandigarh  
CHANDIGARH SINGH RANDHAWA, IAS  
CEO  
Punjab Energy Development Agency  
CHANDIGARH  
Chief Executive Officer

Witness:  


For and on behalf of  
DAV University, Jalandhar

  
Vice Chancellor  
Vice Chancellor  
DAV UNIVERSITY  
JALANDHAR  
Witness:  


  
**ATTESTED**  
Registrar  
DAV University, Jalandhar



**ICAR-Central Soil Salinity  
Research Institute, Karnal (Haryana)**



**DAV University  
Jalandhar, Punjab**

**A MEMORANDUM OF UNDERSTANDING FOR COLLABORATION FOR POST-GRADUATE  
RESEARCH**

**Between**

**ICAR-CENTRAL SOIL SALINITY RESEARCH INSTITUTE (Karnal, Haryana)**

**And**

**DAV UNIVERSITY, (Jalandhar, Punjab)**

ICAR-Central Soil Salinity Research Institute, Karnal - 132001, Haryana, India is a premier research institute dedicated to pursue interdisciplinary research on salinity/ alkalinity management and use of poor quality irrigation waters in different agro-ecological zones of the country. The organization was established in 1969 at Karnal. The Institute has grown into an internationally recognised esteemed centre of excellence in salinity research. Multidisciplinary research activities at the main institute are being strengthened through four research divisions viz., Division of Soil and Crop Management, Division of Irrigation and Drainage Engineering, Division of Crop Improvement and the Division of Technology Evaluation and Transfer. The Institute has developed technologies for the reclamation of alkali soils with the addition of chemical amendments, reclamation of saline soils through subsurface drainage, development and release of salt tolerant crop varieties of rice, wheat and mustard and the land shaping technologies for the reclamation of waterlogged inland and coastal salt affected soils. The Institute has also developed Post Graduate Education programme in association with State Agricultural Universities (SAUs), Indian Institute of Technology (IIT) and other Universities, which has contributed to the growth of the Institute substantially.

At present the institute has a scientific staff /positions with specializations in Agronomy, Soil science, Plant Breeding, Agroforestry, Microbiology, Horticulture, Plant Physiology, Agricultural extension and Agricultural Economics. These scientists are well trained in their field in India and

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**ATTESTED**

**Registrar  
DAV University, Jalandhar**

abroad. There are several prestigious national and international collaborative projects ongoing at the ICAR-CSSRI. The institute has well-equipped laboratories having most modern scientific instruments/facilities. The institute has excellent physical and technical facility for doing research on amelioration of salt affected soils. It is, therefore, proposed to extend collaborative efforts with DAV University (Jalandhar, Punjab) which is having adequate facilities in post graduate teaching and research.

Understanding the scope of participation in this program, the DAV-U, hereafter refer to as the collaborating University and the ICAR-Central soil Salinity Research Institute, Karnal hereafter refer to as ICAR-CSSRI of the Indian Council of Agricultural Research, sign the memorandum of understanding (MOU) for jointly undertaking the post-graduate education/research program, in the above mentioned disciplines with the following terms and conditions and agree to carry out their respective responsibilities as detailed in the MOU.

#### **Terms and conditions**

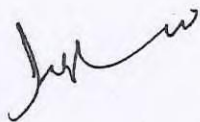
1. The following terms and conditions will be applicable to both the collaborating University and ICAR-CSSRI, as specified in the sub clauses below:
  - 1.1 The yearly programme of admission, number of seats in each subject, PG teaching, student's accommodation in the hostels, area of research etc. will be the responsibility of the collaborating University and shall be as per the university rules & policies.
  - 1.2 The degree will be awarded by the DAV-U.
  - 1.3 If the major advisor of the PG student feels that Faculty or facilities of the ICAR-CSSRI may be helpful in the student's research, the collaboration of ICAR-CSSRI may be sought.
  - 1.4 Any scientist of ICAR-CSSRI fulfilling the qualifications/requirements of PG teachers of DAV-U, on the recommendation of the Director, ICAR-CSSRI may be appointed as major / co-major advisor in the advisory committee of the student as per mutual agreement with the competent authority of the University depending upon the topic of research for thesis and time sharing. ICAR-CSSRI will permit the concerned scientist to act as major / co-major advisor (Co-Guide) of the student.
  - 1.5 The nature of the research undertaken by the student(s) will be preferably related to interdisciplinary research work on soil science, agronomy, horticulture, genetics and plant breeding etc. and will be agreed to by the student's advisory committee and concerned competent authority of the university.

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**ATTESTED**  
  
**Registrar**  
**DAV University, Jalandhar**

- 1.6 Such student will be allowed to utilize the scientific material and physical facilities of ICAR-CSSRI with proper approval of the concerned authorities.
- 1.7 The ICAR-CSSRI would also provide facilities required for research by any other Faculty Member/student of above mentioned disciplines (Clause 1.5) on reciprocal basis provided it does not hinder the natural functioning of the University.
- 1.8 The help rendered by ICAR-CSSRI will be properly acknowledged in the thesis and any research paper/other publication/award emerging out of the research work carried out by the students in collaboration with ICAR-CSSRI will be jointly shared. The concerned student will be the first author and major/co-guide from CSSRI will be the corresponding author. All the IPR will rest with ICAR-CSSRI, if the research work is carried out at ICAR-CSSRI. In the event of equal amount of work being carried out at both ICAR-CSSRI and the university, patents/protections/knowledge generated will be shared in proportion as per mutually settled terms by ICAR-CSSRI and DAV-U.
- 1.9 Student/ faculty from DAV-U will not share any genetic material with any third party without the specific approval of ICAR-CSSRI.
- 1.10 Charges for the student research will be governed by the ICAR rules and laws at any time.
- 1.11 Student has to bear all boarding and lodging charges during the period of his/her stay at ICAR-CSSRI.
- 1.12 Submission of NOC from ICAR-CSSRI will be the mandatory requirement before the award of degree by the university to the concerned student.
- 1.13 The ICAR-CSSRI/Collaborating University will abide by the rules and regulations of the respective organizations.
- 1.14 All questions/issues related to this MoU shall be settled amicably by both parties and disagreement if any shall be forwarded for settlement by arbitrator of mutual acceptance.



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**ATTESTED**  
  
**Registrar**  
**DAV University, Jalandhar**



Executed this 04<sup>th</sup> day of February, 2020 for a period of 5 years, and further extendable with the consent of both the parties.

In Witness Whereof, the authorized representatives of both parties have hereunto affix their signature below:

For the

ICAR-Central Soil Salinity Research Institute

Director

निदेशक/Director  
भा.क.अनु.प.-केन्द्रीय मृदा लवणता अनुसंधान संस्थान  
ICAR- Central Soil Salinity Research Institute  
करनाल-132001/ Karnal-132001

Vice Chancellor, DAV U,  
DAV UNIVERSITY  
JALANDHAR

Signed in the presence of

Coordinating Scientist

ICAR-Central Soil Salinity Research Institute

Karnal, Haryana-132 001

प्रभारी अधिकारी/Officer-in-Charge

पी.एम.ई./PME Cell

भा.क.अनु.प.-केन्द्रीय मृदा लवणता अनुसंधान संस्थान  
ICAR-Central Soil Salinity Research Institute  
करनाल-132001 (हरियाणा)/Karnal-132001 (Haryana)

Dean,

Faculty of Agricultural Sciences **DEAN**  
DAV U, Jalandhar **Faculty of Agriculture Sciences**  
**DAV University, Jalandhar**

Registrar



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**ATTESTED**

**Registrar**  
**DAV University, Jalandhar**



Department of Science, Technology &  
Environment, Government of Punjab



DAV University, Jalandhar

## Memorandum of Understanding

This Memorandum of Understanding (MoU) is entered into on the 16 day of October, 2019 at Chandigarh.

### Between

The Department of Science, Technology & Environment, Government of Punjab, Chandigarh (hereinunder referred to as 'DSTE-GoP' which expression shall where the context so admits include its successors and permitted assigns) of one part.

### And

DAV University, Jalandhar (hereinafter 'referred to as 'DAV University' which expression shall where the context so admits include its successors and permitted assigns) of the other part.

Whereas, the Parties recognize the need to jointly address the issues of state importance pertaining to the environment, climate change and public health to achieve the overall goals and objectives of newly launched Mission Tandrust Punjab 2.0.

And whereas, the Parties recognize the need for promoting Research and Innovation (R&I) ecosystem in the State and particularly using Research and Innovation to enhance competitiveness, boost economic growth and create quality jobs.

And whereas, the Parties have expressed the desire to work together to promote collaborative programmes to make Punjab the R&I Hub and the healthiest State with healthy environment so as to enhance the adaptive capacity and resilience of the State towards emerging challenges.

In witness whereof the Parties now agree to the following :

**ATTESTED**

**Registrar**  
DAV University, Jalandhar

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**Article-1 : Broad areas of Cooperation**

1. The DSTE-GoP and DAV University, Jalandhar have identified the following areas of mutual interest for cooperation:

- (i). Partnership to undertake state specific collaborative research & innovative programs in the areas of Environment, Public Health and Life Sciences.
- (ii). To develop and promote model village in terms of air, water & soil quality, waste management, rain harvesting, zero burning of paddy straw, etc. and to replicate the initiative in other villages.
- (iii). Jointly organize Innovation Summits/Conclaves, capacity building & awareness programmes to promote research and innovation in the State.
- (iv). Any other area of cooperation that may be mutually agreed upon.

2. The DSTE-GoP and DAV University, Jalandhar have jointly identified above said areas for both short and long-term collaboration and will continue to identify additional actions, as required from time to time. The scope of work, financial implications, source of funds, terms of reference & time lines would be determined and mutually agreed to, on a case to case basis.

3. Both Parties will jointly identify financial resources and facilitate implementation of mutually identified activities.

4. Without prejudice to their endeavours to work together, both the Parties shall be free to work independently with other organizations as well, in the areas of mutual cooperation as identified in Para 1 above.

5. Neither Party shall incur any liability, financial or otherwise, on behalf of the other party, without prior written consent of the other Party.

6. The DSTE-GoP and DAV University, Jalandhar may decide mutually all other matters and activities that have not been specially mentioned or provided in the MoU.

**Article-2 : Validity**

This MoU shall be valid for FIVE years from the date of its execution. However, agreements concluded under this MoU shall be valid till the end of contracting obligations and responsibilities of the concerned Parties. The validity of this MoU can be further extended with the mutual consent of the Parties in writing.

**Article-3 : Termination**

This MoU can be terminated by either party by serving one month notice in writing, without assigning any reason, subject to completion of assignments in hand.

**Article-4 : Governing Law**

Laws of India shall govern the MoU.

**Article -5 : Arbitration**

That the disputes, if any, shall be subject to arbitration if mutual consultations between the parties i.e. DAV University, Jalandhar and Department of Science, Technology & Environment, Government of Punjab, Chandigarh, fail to resolve the issue. The arbitration shall be strictly in accordance with the Arbitration Act as amended from time to time. That the jurisdiction in the event of disputes arising out of the terms of the agreement shall be Jalandhar/Chandigarh court.

In witness thereof, the undersigned duly authorized thereto have signed this Memorandum of Understanding.

**R.K. Verma, IAS**  
Principal Secretary  
Department of Science, Technology  
Environment, Govt. of Punjab

**Desh Bandhu Gupta**  
Vice-Chancellor  
DAV University, Jalandhar

**Witnesses:**

1.

Executive Director,  
Majors Cell Council for  
Science & Technology.

2.

Dr. Jyotski Rishi  
Dean Student welfare  
DAV University  
Jalandhar.

**ATTESTED**

**Registrar**  
DAV University, Jalandhar



**DEPARTMENT OF BOTANY  
UNIVERSITY OF KASHMIR**

NAAC ACCREDITED GRADE "A+"

**NORTH CAMPUS, DELINA, BARAMULLA (J&K)-193103**

Website: northcampus.uok.edu.in Email: coordinatorbotnc@uok.edu.in

**TO WHOM IT MAY CONCERN**

This is to place on record that Dr. Ashutosh Sharma, Associate Professor, Faculty of Agricultural Sciences, DAV University Jalandhar is Collaborating with me on various research and academic collaborations from 2019 to till date, in the area of Plant Biology. We are working together on many innovative research ideas, which are continuously being published in the form of the research papers and book chapters etc.

**Dr. Bilal Ahmad Mir**  
Assistant Professor & Coordinator

**ATTESTED**

**Registrar**

**DAV University, Jalandhar**



MIT School of  
Bioengineering Sciences  
& Research  
Breathe Life into Engineering Career!



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UNIVERSITY  
PUNJAB, INDIA  
A DAV Group The World Class Education

## MIT School of Bioengineering Sciences & Research

### TO WHOM IT MAY CONCERN

It is certified that Dr. Ashutosh Sharma, Associate Professor, Faculty of Agricultural Sciences, DAV University Jalandhar is Collaborating with me on various research and academic collaborations from 2019 to till date, in the area of Plant Biology. We are working together on many innovative research ideas, which are continuously being published in the form of the research papers and book chapters etc.

*Shaema*

Signature

Dr. Priyanka Shaema  
(Name)

**ATTESTED**

**Registrar**

**DAV University, Jalandhar**

## JAMIA MILLIA ISLAMIA

(A Central University by an Act of Parliament)

(NAAC Accredited "A++" Grade, NIRF Ranked 3rd)

جامعه مليه اسلاميه

جاميا ميلليا اسلاميا



جامعه  
مليه  
اسلاميه

### Centre for Nanoscience and Nanotechnology

नैनोविज्ञान एवं नैनोप्राद्योगिकी केन्द्र

Maulana Mohammad Ali Jauhar Marg, New Delhi-110025

Tel. : 011-26981717 Extn. 3226 Direct : 011-26987153

E-mail : [cnm@jmi.ac.in](mailto:cnm@jmi.ac.in) Website : <http://jmi.ac.in>

Date: 18/04/2024

### To Whom IT May Concern

It is certified that Dr. Daljit Kaur, Faculty member of Physics Department, DAV University Jalandhar, is collaborating with me on various research problems of nanomaterials from 2019 to the till date. We are working together on many complex nanocomposites and hybrid materials for photocatalytic applications.

*Manika Khanuja*  
Dr. Manika Khanuja  
Assistant Professor  
Centre for Nanosciences and Nanotechnology (CNN)  
Jamia Millia Islamia  
New Delhi  
18/04/2024

ATTESTED

*[Signature]*  
Registrar  
DAV University, Jalandhar