
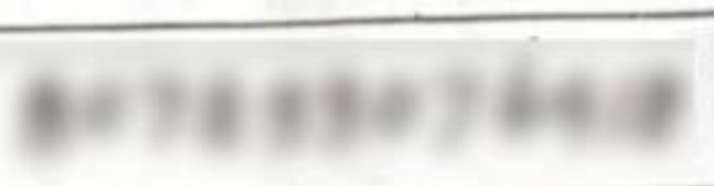

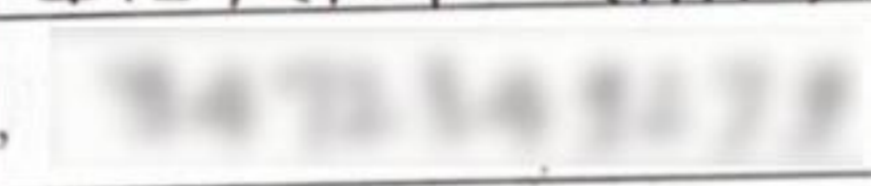


**RDC Teachers Profile Format from AY 2022 to till Date**  
As per Latest NAAC Teacher Profile Format.

Professor       Asso. Professor       Asst. Professor   
 Permanent       Temporary/Guest   
 I. (Please fill the applications Only in Capital Letter (English) and in clear handwriting.)

|    |   |  |                               |   |  |
|----|---|--|-------------------------------|---|--|
| 1  | Name:   | AMIT KUMAR LOVELY  |                               |   |  |
| 2  | Father's/Husband Name   | AJAY KUMAR   |                               |   |  |
| 3  | Date of Birth   | 14-02-1984   |                               |   |  |
| 4  | Blood Group   | O+   |                               |   |  |
| 5  | Date of joining in college *  | Date of Joining as Teacher *   |                               |   |  |
| 6  | Designation   | ASSISTANT PROFESSOR  |                               |   |  |
| 7  | Department  | BOTANY   |                               |   |  |
| 8  | Aadhar Number   |                          | PAN No.                       |  |  |
| 9  | Specialization  |  |                               |   |  |
| 10 | Education Pursuit/Highest Qualification *   | M.Sc Ph.D  |                               |   |  |
| 11 | D.Litt./Ph.D./NET /JRF/SRF  | Ph.D   | Year of Passing:<br>Feb. 2019 | University Name:<br>B.R.A. Bihar Univ. Gura Harpur                                    |  |
| 12 | Are you recognized as research guides (Yes/No) if Yes when attached first registered Scholar letter * |  |                               |   |  |
| 13 | Permanent Residential Address with District and State   | VILLAGE - BHARSO, POST - BHARSO<br>POLICE STATION - PARBATTA<br>DISTRICT - KHAGARIA STATE - BIHAR - (851216) |                               |   |  |
| 14 | Mobile No.  |                          | Computer Knowledge (Yes/No)   | Yes   |  |
| 15 | E-mail  | lovely.amitkumar851@gmail.com  | VIDWAN ID                     | 704763  |  |
| 16 | Teaching Experiences: (in Year)   | UG: 3 Yrs + 1 Month  | PG: 04 Month                  | Total: 3 Yrs + 1 Month  |  |
| 17 | Administrative Experience's   |  |                               |   |  |

"PLEASE WRITE IN CAPITAL LETTER WITH CLEAR READABLE HANDWRITING"

**RDC Teachers Profile Format from AY 2022 to till Date**  
As per Latest NAAC Teacher Profile Format.

**31. List details of International / National / State level Seminars/ Conferences/ Symposia attended /presented paper / resource person**

| Date | Name of Seminar/Conferences/Symposia | Level (International/National/State /Local) | Attended (Yes/No) | Paper Presented (Yes/No) | As Resource Person (Yes/No) |
|------|--------------------------------------|---|-------------------|--------------------------|-----------------------------|
|      | N S C C B R - C O<br>2 0 2 6         | National                                    |                   | Yes                      |                             |
|      |                                      |   |                   |                          |                             |
|      |                                      |   |                   |                          |                             |
|      |                                      |   |                   |                          |                             |
|      |                                      |   |                   |                          |                             |

**Note:**

Please add additional sheets wherever required to record extra information to the provisioned template information.

Please enclose all mandatory documents, evidences, photographs, newspapers cutting to substantiate the information provided in above format at the time of submission.

**Declaration**

I, AMIT KUMAR LOVELY hereby declared that all information furnished by me in this application is true to the best of my knowledge & belief and all supporting documents/certificates/evidences enclosed herewith as per mentioned information.

Date:.....

*Amit Kumar Lovely*  
Signature of the Applicant

IQAC Co-Ordinator  
Seal and Signature

"PLEASE WRITE IN CAPITAL LETTER WITH CLEAR READABLE HANDWRITING"



**NATIONAL SEMINAR ON CLIMATE CHANGE AND  
BOTANICAL RESEARCH: CHALLENGES AND  
OPPORTUNITIES  
(NSCCBRCO-2026)**

*Organized by*

**UNIVERSITY DEPARTMENT OF BOTANY**  
Babasaheb Bhimrao Ambedkar Bihar University, Muzaffarpur, Bihar

*This certificate has been awarded to Prof./Dr./Mr./Miss* AMIT KUMAR LOVELY

*from Deptt. of Botany, K. M. D. College, Purbhatta for the participation / presentation (oral/poster) of  
his/her paper entitled Role of modern biotechnology in improving crop resilience  
for sustainable and climate smart agriculture in 3-Days National Seminar held at University*

*Department of Botany, B. R. A. Bihar University, Muzaffarpur, Bihar from January 19<sup>th</sup> to 21<sup>st</sup>, 2026.*

  
Organizing Secretary

Neelam Kumari  
Convenor



NATIONAL SEMINAR ON

# CLIMATE CHANGE AND BOTANICAL RESEARCH

— *Challenges and Opportunities* —



*Organized by*

UNIVERSITY DEPARTMENT OF BOTANY  
BABASAHEB BHIMRAO AMBEDKAR BIHAR UNIVERSITY  
MUZAFFARPUR, BIHAR, INDIA

*January 19<sup>th</sup> - 21<sup>st</sup>, 2026*



the water or with the natural functioning of ecosystems. In addition to the release of substances, such as chemicals, trash, or microorganisms, water pollution may include the release of energy, in the form of radioactivity or heat, into bodies of water. Water pollution, a global crisis, occurs when harmful substances—like industrial waste, sewage, pesticides, plastics, and heavy metals—contaminate water bodies, making them unsafe for humans, animals, and ecosystems, leading to diseases (diarrhoea, cholera), ecosystem disruption, and threatening finite freshwater resources, expanding populations, intensive agriculture, climate change, water pollution and depleting natural water resources are the main drivers of water scarcity in India. Besides expanding population, industrialisation accounts for about a 4% rise in water demand annually, resulting in a substantial increase in industrial wastewaters.

With a population that is close to 147 crore, India's water-borne disease burden is also high. All States should immediately check water supply sources for chemical and sewage contaminants. It is a shame that despite progress under the Swachh Bharat Mission and Jal Jeevan Mission, water woes continue. Controlling water pollution involves a multi-pronged approach, combining improved wastewater treatment (physical, chemical, biological), reducing chemical use in industry and agriculture (switching to organic methods), proper disposal of household waste (no dumping oils, meds, chemicals down drains), reducing plastic use, and raising public awareness about conservation and responsible habits, all supported by strong regulations. Key methods include advanced filtration, bioremediation (using plants like water hyacinth), and implementing policies like India's Water Act to manage effluent quality and discharge.

**Keywords:** Diarrhoea, ecosystem, estuaries, heavy metals, pesticides, sewage

OP-003

## ✓ **Role of Modern Biotechnology in Improving Crop Resilience for Sustainable and Climate Smart Agriculture**

✓ **Amit Kumar Lovely\*** ✓

*K. M. D. College Parbatta, Munger University, Munger, Bihar, India*

\*Correspondence email address: [lovely.amitkumar851@gmail.com](mailto:lovely.amitkumar851@gmail.com)

Climate change has emerged as one of the most serious challenges to global agriculture, threatening crop productivity through increased incidence of drought, floods, heat stress, salinity, and the spread of new pests and diseases. These stresses significantly undermine food security, particularly in climate-vulnerable regions. Enhancing crop resilience is therefore essential for achieving sustainable and climate-smart agriculture. Modern biotechnology provides innovative and efficient tools to develop resilient crop varieties capable of adapting to changing environmental conditions while ensuring stable yields. The role of modern biotechnological approaches, such as genetic engineering, marker – assisted selection, molecular breeding, tissue culture, genome editing technologies, including CRISPR/ Cas systems, in improving crop resilience. These techniques enable precise identification, modification and transfer of stress – responsive genes, accelerating the development of improved crop varieties. Successful examples include submergence-tolerant rice (sub1), drought - tolerant maize, insect – resistant Bt cotton, disease – resistant banana, and

salinity-tolerant wheat, which have demonstrated enhanced tolerance to abiotic and biotic stresses, reduced yield losses, and improved farmer livelihoods under adverse climatic conditions. Biotechnology also plays a vital role in managing biotic stresses by developing pest- and disease-resistant crops, thereby reducing reliance on chemical pesticides and minimising environmental pollution. Looking ahead, future prospects of biotechnology in climate-smart agriculture include the development of multi-stress-tolerant crops capable of withstanding complex climate scenarios. Integration of biotechnology with precision agriculture, genomics, bioinformatics, artificial intelligence, and microbial technologies is expected to further enhance crop improvement efforts. Advances in gene editing, synthetic biology, and plant-microbe interactions offer promising opportunities to improve resource-use efficiency, soil health, and climate resilience. However, the successful adoption of biotechnological innovations requires supportive regulatory frameworks, public awareness, and ethical considerations.

In conclusion, modern biotechnology represents a powerful approach to improving crop resilience and promoting sustainable and climate-smart agriculture. Its strategic application can help build resilient agricultural systems capable of ensuring food security, environmental sustainability and economic stability in the face of climate change. This approach strengthens agriculture for present and future generations.

**Keywords:** Agriculture, biotechnology, CRISPR, crop resilience, sustainability

OP-004

### Valorization of Municipal Wastewater for Biomass and Biofuel Production by Microalgae *Chlorella* sp.

Amrit Lal\*

Department of Botany, Sri Radha Krishna Goenka College, Sitamarhi, Bihar, India

\*Correspondence email address: [ikgpian@gmail.com](mailto:ikgpian@gmail.com)

High cultivation costs and limited freshwater are major barriers for commercial production of microalgal biofuel. This study evaluates the valorisation of municipal wastewater for the cultivation of *Chlorella* sp. in an airlift photobioreactor for low-cost biomass production. This integrated process allows nutrient recovery and feedstock generation for biofuel production simultaneously. Experimental results indicate that *Chlorella* sp. effectively sequestered nutrients present in municipal wastewater. The nutrient utilisation efficiency of *Chlorella* sp. was above 90% for N and P. It showed a maximum growth rate of  $0.36 \text{ d}^{-1}$  and biomass concentration of  $1.28 \text{ g L}^{-1}$ . Nutrient-rich wastewater under batch mode of cultivation, it accumulated 28% lipids (dry weight) which makes it suitable for biodiesel conversion. The findings suggest that coupling wastewater treatment with *Chlorella* sp. cultivation offers a suitable strategy to improve the Net Energy Ratio (NER) as compared to conventional systems. Thus, the resulting biomass of *Chlorella* sp. cultivated in municipal wastewater can be a cost-effective and suitable feedstock for bioethanol and biomethane production.

**Keywords:** Biofuel, Biomass, *Chlorella*, Microalgae, Wastewater valorisation