# आण्विक जीवविज्ञान और जैव प्रौद्योगिकी विभाग
# आचार्य नरेंद्र देव कृषि एवं प्रौद्योगिक विश्वविद्यालय,
कुमारगंज, अयोध्या–224229 (उ०प्र०), भारत

# Department of Molecular Biology and Biotechnoogy
## Acharya Narendra Deva University of Agriculture and Technology,
Kumarganj, Ayodhya-224229 (U.P.), India

**ABOUT THE DEPARTMENT:** The department of Molecular Biology and Biotechnology was established in the university in the year 2004. The M.Sc. (Ag.) degree programme in Agricultural Biotechnology commenced from the session: July, 2004. The Ph.D. degree programme in Agricultural Biotechnology started from the year July, 2008. The Ph.D. degree programme in Agricultural Biotechnology started from the year July, 2008. The B. Tech Biotechnology degree programme started from the year July, 2023. The department offers courses in Agricultural Biotechnology for under-graduate, post-graduate and Ph.D. students of College of Agriculture, College of Fisheries, and College of Horticulture & Forestry. The Department is well-equipped with laboratories for molecular work. Till date department have produced 180 M.Sc. (Ag.) and 36 Ph.D. students.

**VISION:**

The vision of the department is to become a premier and recognized centre of excellence in teaching and research. The faculties of the department are actively engaged in providing quality education to the students for transforming their lives, and making them future professionals and academicians.

**OBJECTIVES:**

- To impart core and conceptual knowledge of agricultural biotechnology to the students.
- To provide global recognition to the under-graduate, post-graduate and Ph.D. students through innovative research in theoretical and applied biotechnology.
- To use molecular approaches for incorporating abiotic and biotic resistance in crop plants.
- To develop trained manpower in the area of plant biotechnology.

**FACULTY STRENGTH:**

| Sr. No. | Name of faculty | Designation |
|---|---|---|
| 1. | Dr. Nawaz Ahmad Khan | Professor & Head, Molecular Biology & Biotechnology |
| 2. | Dr. Shambhoo Prasad | Professor, Molecular Biology & Biotechnology |
| 3. | Dr. Adesh Kumar | Professor, Molecular Biology & Biotechnology |
| 4. | Dr. Hemant Kumar Yadav | Assistant Professor, Molecular Biology & Biotechnology |
| 5. | Dr. Ashwini Kumar | Assistant Professor, Molecular Biology & Biotechnology |

# Faculty Profile



**Dr. Nawaz Ahmad Khan**
**Professor& Head**

headmbb786@gmail.com,

nakhan0110@gmail.com

Mob.No. 9721131949

**Designation:** Professor & Head, Dept. of Molecular Biology & Biotechnology

**Research Interests & Expertise:** Biotic & Abiotic Stresses, Biochemistry**,** Molecular Biology & Biotechnology

**Qualifications:** Ph.D. in Biochemistry VC's Gold Medal (M.Sc. Ag.)

**Experience:** Teaching: >25 Years; Research: >28 Years

**Publications: Research Paper:** 110; Books-9, Books Chapter-31, Training-1, Patent-1, Radio Talk-1, Participated in faculty Development-7, Workshop/Seminar Attended-116, guest lecturers/expert talks-5, Life Fellow member-6

**Achievements:** Project- PI DBT, New Delhi, (May 2007 to May 2011) Amount Sanction: Rs. 27.25 Lacks**,** Project- PI UPCAR, Lucknow, (24/07/2014 to 24/7/2017) Amount Rs. 17.358 Lacks

**Awards & Recognitions: 1**0

**Students Guided:** Ph. D. - 10, M. Sc. -36



**Dr. Shambhoo Prasad**

**Professor**

shambhoobiotech@nduat.org

Mob.No. 9450766603

**Designation:** Professor, Department of Molecular Biology & Biotechnology

**Research Interests & Expertise: Plant Physiology,** Molecular Biology for Abiotic Stress in Crop Plants

**Qualifications:** Ph.D. in Crop Physiology, ASRB NET (Two-1999 & 2001)

**Experience:** Teaching: >22Years; Research: >26 Years;

**Publications:73, Research Paper:** National-41; International-32 Books-4, Books Chapter-35

**Achievements:**

- Projects: 10,
- Patents: 03
- Varieties developed: 02 (NDO 1101 (Oat), NW 7006 (Wheat)
- Developed dual tolerance rice lines
- Developed terminal heat tolerance wheat lines

**Awards & Recognitions: 11**

**Students Guided:** Ph. D. - 07, M. Sc. -32



**Dr. Adesh Kumar**

**Professor**

adeshkumar1977@gmail.com,

Mobile: 9454864278

**Designation:** Professor, Dept. of Molecular Biology & Biotechnology

**Research Interests & Expertise:** Bioprospecting of Microbes

**Qualifications:** Ph.D. in Microbiology, ICAR-IARI, New Delhi, CSIR-JRF, CSIR-NET, ICAR-NET

**Experience:** Teaching: >18 Years; Research: >18 Years

**Publications: Research Paper:** 66, Books-13, Books Chapter-18

**Achievements**: Projects- PI CSTUP, (July2011 to June 2014), Project by UPCAR, Lucknow, (24/07/2014 to 24/7/2017), Submitted several agriculturally important microbes to repository, Patent published - 01

**Awards & Recognitions:** 09

**Students Guided:** Ph. D. - 04, M. Sc. -29



**Dr. Hemant Kumar Yadav**

**Assistant Professor**

hemant6358@gmail.com,

Mobile: 9451460379

**Designation: Assistant** Professor, Department of Molecular Biology & Biotechnology

**Research Interests & Expertise:** Molecular Biology of abiotic stress tolerance in crop plants

**Qualifications:** Ph.D. in Ag. Biotechnology & ICAR-NET

**Experience:** Teaching: >3 Years; Research: >11Years

**Publications:** Research Paper: 23, Books-4, Books Chapter-6

**Awards & Recognitions: -** 01

**Students Guided:** M. Sc. -05



**Dr Ashwini Kumar**

**Assistant Professor**

ashwinikumar1500@gmail.com,

Mobile: 9205028077

**Designation:** Assistant Professor, Dept. of Molecular Biology & Biotechnology

**Research Interests & Expertise:** Molecular Virology & Genetic Engineering

**Qualifications:** Ph.D. in Ag. Biotechnology & ASRB-NET

**Experience:** Teaching: >3 Years; Research: >11 Years

**Publications:** Research Paper-30: Books-01, Books Chapter-03

**Achievements:** Projects: 05

**Technology Developed:** 2

**Awards & Recognitions:** 08

**Students Guided:** M. Sc. -03

**PROGRAMMES OFFERED**

- **M.Sc. (Ag.) Molecular Biology and Biotechnology**
- **Ph.D. Molecular Biology and Biotechnology**

**PG and Ph.D. Courses:**

| S. No. | Course No. | Course Title | Credit |
|---|---|---|---|
| **M.Sc. (Ag.)** | | | |
| 1 | MBB-502 | Fundamentals of Molecular Biology (Core) | 3 (3+0) |
| 2 | MBB-503 | Molecular Cell Biology (Core) | 3 (3+0) |
| 3 | MBB-504 | Techniques in Molecular Biology I(Core) | 3 (0+3) |
| 4 | MBB-505 | Omics and Systems Biology (Core) | 3 (2+1) |
| 5 | MBB-506 | Plant Genetic Engineering (Optional) | 3 (3+0) |
| 6 | MBB-508 | Introduction to Bioinformatics | 3 (2+1) |
| 7 | MBB-509 | Plant Tissue culture (Optional) | 3 (2+1) |
| 8 | MBB-510 | Microbial and Industrial Biotechnology (Optional) | 3 (2+1) |
| 9 | MBB-515 | Environmental Biotechnology | 3 (3+0) |
| 10 | MBB-591 | M.Sc. (Ag)Seminar | 1 (0+1) |
| 11 | MBB-599 | M.Sc. (Ag)Research | 30 (0+30) |
| **Ph.D.** | | | |
| 1 | MBB-601 | Plant Molecular Biology (Core) | 3 (3+0) |
| 2 | MBB-602 | Plant Genome Engineering (Core) | 3 (3+0) |
| 3 | MBB-604 | Commercial Plant Tissue Culture | 2 (2+0) |
| 4 | MBB- 605 | Plant Microbes Interaction | 2 (2+0) |
| 5 | MBB-606 | RNA Biology | 1 (1+0) |
| 6 | MBB-607 | Plant Hormones &Signaling (Optional) | 2 (2+0) |
| 7 | MBB-608 | Computational and Statistical tools in Biotechnology | 3 (2+1) |
| 8 | MBB- 691 | Ph.D. Seminar-I | 1(0+1) |
| 9 | MBB- 691 | Ph.D. Seminar-II | 1(0+1) |
| 10 | MBB-699 | Doctoral Research | 75(0+75) |

**List of Major equipment Available in the Department**

| Sr. No. | Name of Equipment | Quantity |
|---|---|---|
| 1 | PCR | 02 |
| 2 | Centrifuge Machine | 02 |
| 3 | Gel Doc System | 02 |
| 4 | `Spectrophotometer | 02 |
| 5 | Electronic Balance | 02 |
| 6 | 2D-Gel Electrophoresis | 01 |
| 7 | Horizontal Gel Electrophoresis | 02 |
| 8 | Vertical Gel Electrophoresis | 02 |
| 9 | Laminar Air Flow | 02 |
| 10 | Autoclave | 02 |
| 11 | Transblot | 01 |
| 12 | $-20^0$C Deep Freezer | 01 |
| 13 | Nanodrop | 01 |

**Ongoing Research Projects**

| S. No | Title of The Project | Amount | Funding agency | Duration |
|---|---|---|---|---|
| - | - | - | - | - |

**Major Achievements the Department (Teaching, Research, Extension)**

| S. No | Major Achievement |
|---|---|
| 1. | Patent -05 |
| 2. | Varieties Released-02 |
| 3. | Project Completed- 14 |
| 4. | Research Paper- 302 |
| 5. | Book-27 |

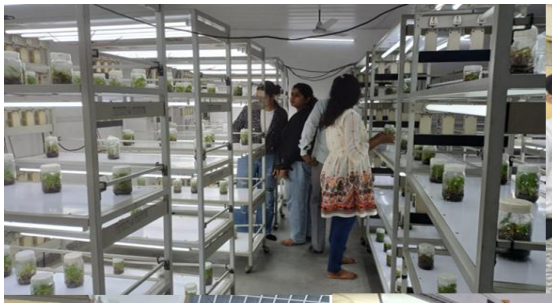
**Distinguished Alumni of the Department**

| Sr. No | Name of Alumni | Designation and Address | Degree |
|---|---|---|---|
| **1** | Dr. Prashant Yadav | Senior Scientist at ICAR- Directorate of Rapeseed & Mustard, Bharatpur, Rajsathan | M.Sc. |
| **2** | Dr. Mohd. Shamim | Assistant Professor, BAU Sabour, Bihar | Ph.D. |
| **3** | Dr. Ashutosh Singh | Assistant Professor, RLBCAU, Jhansi | M.Sc. |
| **4** | Dr. Hemant Kumar Yadav | Assistant Professor, ANDUAT, Kumarganj, Ayodhya | Ph.D. |
| **5** | Dr. Parveen Fatima | Assistant Professor, BAU Sabour, Bihar | M.Sc. |
| **6** | Mr. Vikram Kumar | Project Manager at Indo-American seed, Hyderabad | M.Sc. |
| **7** | Dr. Deepti Srivastava | Assistant Professor, Integral university, Lucknow | Ph.D. |
| **8** | Dr. Anurag Mishra | Assistant Breeder at Indo-American seed, Hyderabad | M.Sc. |
| **9** | Dr. Arun Kumar | Assistant Professor, RML Awadh University, Aayodhya | Ph.D. |
| **10** | Dr. Kunvar Gyanendra Kumar | Assistant Professor, MPU, Bhopal | Ph.D. |
| **11** | Dr. Divya Srivastava | Assistant Professor, Adamas University, Kolkata | Ph.D. |
| **12** | Dr. Akanksha Singh | Assistant Professor, Mangalayatan University, Aligarh | Ph.D. |
| **13** | Dr. Sonam Singh | Assistant Professor, RML Awadh University, Aayodhya | Ph.D. |
| **14** | Dr. Komal | Assistant Professor, CCS University, Meerut | Ph.D. |
| **15** | Dr. Bandana Jaiswal | Assistant Professor, IIMT University, Meerut | Ph.D. |

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|---|---|---|---|
| **16** | Mr. Umesh Shukla | Manager, Pioneer Seed Company, UP | M.Sc. |
| **17** | Mr. Rakesh Dwivedi | Scientist, Syngenta | M.Sc. |

**Photographs of Different Activities**












GPS Map Camera
Kumarganj, Uttar Pradesh, India
Grrj+3p2, Kumarganj, Uttar Pradesh 224229, India
Lat 26.540273° Long 81.832761°
23/09/2025 10:44 AM GMT +05:30
Google




GPS Map Camera
Kumarganj, Uttar Pradesh, India
Grrj+3p2, Kumarganj, Uttar Pradesh 224229, India
Lat 26.540224° Long 81.832794°
22/09/2025 04:42 PM GMT +05:30
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