

## Curriculum Vitae

Name	:	Prof. Pranab Dutta
Designation	:	Chairman-Crop Protection
Date of Birth	:	1 <sup>st</sup> January, 1974
Discipline/Area of specialization	:	Plant Pathology specialization in Biological Control, Nanotechnology
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Google Scholar Matrix	:	Citation:2858 ; H-Index: 25, i-10 index:60
Research Paper	:	NAAS > 10: 17 nos, NAAS 8-10: 14 nos, NAAS 6-8: 17 nos.
Student Guided	:	PhD: 6 nos, MSc: 19 nos
Patent Granted	:	3 nos (Product and Design Patent)

### KEY LEADERSHIP ACHIEVEMENTS

- **Pioneered a Complete Value Chain for Sustainable Agri-Inputs:**
  - **Technology Development:** Standardized **10 robust liquid bioformulations** from indigenous biocontrol agents, achieving a critical **16-month shelf-life** to ensure commercial viability, reduce waste, and enhance smallholder accessibility.
  - **Production & Infrastructure:** **Founded and operationalized a state-of-the-art Biopesticide Production Unit**, creating a localized supply chain to manufacture and deliver high-quality, sustainable pest management solutions directly to end-users.
  - **Commercialization & Scale:** **Championed market-led development** by commercializing **6 technologies** through a public-private partnership (PPP) with a local enterprise, demonstrating a scalable model for wider replication.
  - **Knowledge Transfer & Adoption:** **Led the successful technology transfer of 2 core platforms** to the Governments of Meghalaya and Nagaland, building regional production capacity and ensuring community ownership, leading to widespread adoption of organic practices.
- **Chartered and implemented the SOP-driven framework** for Assam's inaugural private-sector PEQ facilities, ensuring full Gol compliance for international plant imports and de-risking a critical supply chain for local farms.
- **Drove Frontier Research & Innovation for Climate Resilience:**
  - **Advanced Research Infrastructure:** **Established a pioneering Nanotechnology Research Laboratory** as a hub for innovation and advanced human capital development (PG/PhD).
  - **Green Chemistry Innovation:** **Secured a foundation for intellectual property** by developing a novel, **green-engineered synthesis protocol** for patentable metallic nanoparticles (Ag, Au, Cu, ZnO), aligning with global trends in sustainable nanotechnology.
  - **Development of Climate-Resilient Practices:** **Pioneered 5 biointensive integrated Packages of Practices (PoPs)** specifically for fragile hill-based ecosystems, enhancing productivity while promoting biodiversity,

ecological sustainability, and minimizing environmental degradation.

- **Demonstrated Sustainable Impact & Systems Change:**
  - **Empowered farming communities** and facilitated a measurable reduction in dependency on chemical inputs.
  - **Promoted biodiversity-based ecological intensification** of agriculture, contributing to safer, more secure food production systems.
  - **Strengthened the entire agricultural knowledge system** from foundational research to field-level application and market access.

### ***Leadership in Global Research & Partnership Building***

- **Acquired and managed an extensive research portfolio**, successfully securing funding for and leading **27+ projects** (20 completed, 7 ongoing) as Principal Investigator (PI) or Co-PI, demonstrating consistent capability in resource mobilization.
- **Architected a premier international research consortium**, establishing **20+ strategic collaborative partnerships** with leading national and global institutions to pioneer applied research in frontier areas of agricultural science.
- **National Partners:** IIT Guwahati, IARI, NBAIR, TNAU, NIT, AAU.
- **International Partners:** UC Davis; San Joaquin County Agricultural Commissioner's Office (USA); Minia University (Egypt); Jan Dlugosz University, University of Wroclaw, Lodz University of Technology (Poland).
- **Directed collaborative research programs** directly contributing to **UN Sustainable Development Goals**, with focus areas including:
  - Discovery of novel molecules for sustainable pest/disease management.
  - Development of next-generation agribiologics and biostimulants.
  - Advancing systems for sustainable crop production and healthy food.

### ***Expertise in Capacity Development & Stakeholder Empowerment***

- **Conceived and orchestrated 17 high-impact training workshops** that built technical capacity for **500+ beneficiaries** across the agricultural value chain, from research scientists to frontline implementers (State Govt., NGOs, FPOs, SHGs).
- **Curriculum focused on end-to-end skill development** in biopesticide technology, including advanced topics (mother culture maintenance, quality measurement) and practical field application (production methods, demonstration), directly enabling community-level adoption and organic transformation of model villages.

### ***Leadership in Mentorship, Capacity Building & Talent Development***

- **Mentored 8 postgraduate scholars** to secure highly competitive **national fellowships** (DST-INSPIRE, ICAR-SRF, Ministry of Tribal Affairs), demonstrating a commitment to fostering talent and supporting scholars from diverse backgrounds.
- **Cultivated a culture of academic excellence:** Under my guidance, students earned **4 University Gold Medals** for top academic performance and **2 MJ Narasimhan Awards** for outstanding research in plant sciences.
- **Enabled global scientific engagement:** Secured **2 International Bursary Awards** and **2 IPS/APS Travel Grants** for students, facilitating their participation and knowledge exchange on the world stage.
- **Built a pipeline for future leaders:** Successfully mentored and placed 9

trainees into influential agricultural roles (6 **Assistant Professors**, 1 **Scientist**, 2 **Subject Matter Specialists**), contributing directly to strengthening agricultural extension and education systems.

- **Championed high-impact research communication:** Supervised students to an exceptional **45 Best Poster/Oral Presentation Awards** at scientific conferences, underscoring the relevance, quality, and impact of our research portfolio.

### ***Research and Technical Expertise:***

#### **1. Sustainable Crop Protection & Productivity:**

- Application of beneficial microbes and natural enemies for **biological control** of agricultural pests.
- Development of stable, scalable, and effective **bioformulations** for real-world agricultural use.

#### **2. Nano-enabled Agricultural Innovation:**

- Leveraging **nanotechnology** to create smart delivery platforms (**nanoformulations**) for nutrients, biopesticides, and plant health elicitors.
- Engineering novel **drug delivery systems** for precise targeting, controlled release, and increased absorption in plants.

#### **3. Enhancing Plant innate Immunity:**

- Investigating molecular and physiological **host defense** mechanisms triggered by bio- and nano-formulations to develop resistant crop varieties.

### ***Education:***

- Post Doctorate training at Asian Institute of Technology, Thailand (2023)
- Post Doctorate training at Food and Environment Research Agency, London (2013)
- MBA from Sikkim Manipal University, India (2012)
- PhD in Life Sciences from Dibrugarh University, Dibrugarh, Assam (2006)
- ICAR-NET for 2001 and 2004
- MSc in Plant Pathology from Assam Agricultural University, Jorhat, India, (1998)
- BSc in Agricultural from Assam Agricultural University, Jorhat, India, (1996)

### ***International Engagements & Thought Leadership***

- **Invited Global Speaker:** Recognized as a lead speaker and expert at premier international forums including the **MISA Conference (USA, 2020)**, the **International Congress of Plant Pathology (USA, 2018)**, and the **Asian PGPR International Conference (Indonesia, 2021)**, disseminating cutting-edge research to global scientific and policy audiences.
- **Vice President** of Asian PGPR Society for Sustainable Agriculture-2025-2027
- **Academic Capacity Development:** Served as **Visiting Faculty at the Centre of Excellence on Nanotechnology**, Asian Institute of Technology (Thailand, 2023), contributing to advanced human capital development in a strategic field critical to sustainable agricultural innovation.
- **Mentorship & Next-Generation Engagement:** Advised and led student delegations at international symposia, including the **4th International Agricultural Students Symposium (Malaysia, 2013)**, demonstrating a commitment to fostering future leaders in agriculture.

### ***Professional experience & leadership***

**CENTRAL AGRICULTURAL UNIVERSITY (IMPHAL)**

- **Chairman-Crop Protection** | College of Post Graduate Studies in Agricultural Sciences, CAU (Imphal), Umiam, Meghalaya | Sept 2025- till date
- **Professor of Plant Pathology** | College of Agriculture, Kyrdemkulai, Meghalaya | Feb 2024 – Sept 2025
- **Associate Professor of Plant Pathology** | College of Post Graduate Studies, Umiam, Meghalaya | Jan 2020 – Feb 2024
- **Academic & Research Leadership:** Spearheaded a robust research programme on sustainable crop protection, biological control] leading a team of researchers and graduate students. Cultivated a new generation of agricultural scientists.
- **Advanced Human Capital Development:** Mentored and guided **22 postgraduate students (17 MSc, 5 PhD) as Chair** of their advisory committees, and contributed to the training and development of **over 150 MSc and PhD students** as a committee member, significantly building national agricultural research capacity.
- **Institutional Capacity Building:** Designed and delivered **4 national training programmes** as Course Director, enhancing the skills of scientists from across India in e.g., advanced diagnostic techniques, integrated pest management, making better use of bioformulations, confocal microscopy etc

### ASSAM AGRICULTURAL UNIVERSITY, Jorhat, Assam

- **Junior Scientist (S-II)** | 2016 – 2020
- **Junior Scientist** | 2012 – 2016
- **Research Excellence:** Conducted pioneering research on [biological control, nanotechnology, host defence etc, leading to the development of 10 new bio-formulation, 4 nanobiotechnology based products, a bio-intensive pest management model. Published 80 papers in international, peer-reviewed journals.
- **Grassroots Impact & Extension:** As **Programme Coordinator & Head (2008-2011)** of Krishi Vigyan Kendra (Khowai, Tripura), bridged the gap between research and application. **Led a team to transfer technology and improve productivity for over 3000 smallholder farmers**, directly contributing to local food security and livelihood enhancement.

### INTERNATIONAL & NATIONAL ENGAGEMENT

- **Knowledge Dissemination:** Presented research findings at **over 35 national and international conferences**, establishing a strong professional network and staying at the forefront of global plant pathology research.
- **Strategic Event Management:** Demonstrated organizational leadership by serving as **Organizing Secretary, Convenor, or Joint Secretary for 13 national and international conferences, workshops, and training programs**, facilitating crucial multi-stakeholder dialogue on agricultural development.

#### **Patents/Publications:**

- Patent Granted : 3 (2024 and 2025), and for 1 patent waiting for NBA approval
- Indian patents published– 1 no, new patent filled- 2 nos (1 product and another Design)
- Genome Sequence of microorganism deposited: 37 nos
- Published more than 180 research articles and review articles, 70 book chapters, 27 books, 28 practical/training manuals, 43 extension bulletins, 83 popular articles, 6 souvenir cum book of abstract for national and international conference, 15 success stories.

#### **Award / Recognition:**

- **Recipient** of DBT Overseas Associate for Post Doctoral Research on Nanotechnology at FERA, UK, London (2012)
- **Bursary Award** to attend ICPP-2018, Boston, USA and ICPP-2023, Lyon, France
- Chandish Ballal
- **Sharda Lele Memorial Award** of Indian Phytopathological Society, India (2023)
- **IDP-NAHEP Fellowship** to visit Asian institute of Technology, Thailand (2023)
- **Expert Committee** Member of Indian Council of Forestry Research, Dehradun (2022-2024)
- **Chairman**, PMDevine Organic Certification, DST-Certification (2025-2026)
- **Expert Member** for Organic Certification, Govt. of Meghalaya (2024)
- **Expert** - Consultative Workshop on the Biotechnology Policy for the State of Meghalaya
- **External Member**, Board of Studies (BoS) in Plant Pathology of Rajiv Gandhi University, Rono Hills, Doimukh, ) Arunachal Pradesh 2024-2027(
- **Sir E. J. Butler Memorial Award, Indian Mycological Society, Kolkata (2024)**
- **Dr A P J Abdul Kalam Scientist** Award of AETDS (2019)
- **Young Scientist Award** at Navsari Agricultural University (2019)
- **Sectional Editor** of Indian Phytopathology(2020-2022)
- **Fellow** of Indian Mycological Society, Kolkata (2025)
- **Fellow** of Society of Plant Protection Science, ICAR-NCIPM, New Delhi (2022)
- **Fellow** of Society of Biocontrol Advancement, ICAR-NBAIR, Bangalore (2021)
- **Fellow** of Society of Biotic and Environment Research, Tripura(2021)
- **Outstanding Plant Pathologist Award** of DISHA, Jharkhand (2021)
- **Best poster and Oral presentation** award-25 in national and international conferences, seminar, workshop
- **Editor-in-Chief**, Journal of Plant Health Archives (2021 onward)
- **Editor** (Sectional) of Indian Society of Mycology and Plant Pathology (2021-2023)
- **Resource person** for 78 times in CAFT programme, skill development programme, training programme etc
- **Invited speaker** -20, **lead speaker**-12, **key note lecture**-2 in national and international conference
- **External** PhD thesis evaluators of IARI, New Delhi (2023); BCKV, West Bengal(2022), Techno India University, West Bengal(2024)
- **External Expert**, for North East Centre for Technology Application and Reach(NECTAR), DST, Govt. of India for PM-DevINE, 2024.

#### **International Recognition:**

- Fellow of Linnean Society of London (2021)
- Visiting Faculty at Asian Institute of Technology, Thailand (2023)
- Editor of Frontiers in Microbiology, Switzerland (2023 onward)
- Reviewer of Plant Pathology, Phytopathology (2020-2023), USA
- Reviewer of activities of United Nations University Programme of Biotechnology for Latin America and the Caribbean (UNU-BIOLAC) for 2026
- Recipient of Bursary Registration Fee to participate ICPP-2023 (not availed), Lyon, France
- Recipient of Bursary Travel grant to attend ICPP-2018, USA
- Country visited for academic work: UK, USA, Malaysia, Thailand etc.

#### **Associate of Professional Societies:**

- National Secretary (Honorary), Society for Biotic and Environmental Research
- Zonal Councilor, Indian Phytopathological Society, NEZ (2021)
- Convenor of 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Biotic Congress of Society for Biotic and Environment Research (2020, 2022, 2023),
- Jt Organizing Secretary of Zonal Symposium of Indian Phytopathological Society (2021), CAU (I), Umiam

- Co-Organizing Secretariats and Chairman of Technical Committee of International Conference of Indian Society of Agricultural Economics (2023), CAU (I), I
- Jt. Organizing Secretary of Annual meeting cum international conference of Indian Phytopathological Society (2018), AAU, Jorhat.
- Chairman of Technical Committee for 35<sup>th</sup> Biennial conference of Home Science Association on India-2024, CAU-CPGSAS, Umiam, Meghalaya
- Co Chairman of Technical Committee, Agrivision, for 1<sup>st</sup> Zonal Convention-North East Bharat-2024, CAU-CPGSAS, Umiam, Meghalaya.

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