# **RESUME**

**NAME:** Dr. Nirmal Mandal **DESIGNATION:** Professor

### **CONTACTS:**

### 1. OFFICIAL ADDRESS FOR CORRESPONDENCE:

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P.O. Krishi Viswavidyalaya, Dist. Nadia, West Bengal, PIN-741252

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4. **GOOGLE SCHOLAR PROFILE:** <a href="https://scholar.google.com/citations?user">https://scholar.google.com/citations?user</a>=

iiTX9\_MAAAAJ&hl=en&oi=ao

5. **RESEARCHGATE PROFILE:** https://www.researchgate.net/profile/Nirmal\_Mandal-9

6. **DATE OF JOINING TO THE UNIVERSITY:** 10 / 01/ 1996

### 7. ACADEMIC PROFILE:

| LEVEL      | NAME OF THE DEGREE WITH DISCIPLINE/ DEPARTMENT | INSTITUTE               | YEAR OF<br>PASSING |
|------------|--|-------------------------|--------------------|
| DOCTORAL   | Ph.D. (Ag.) in Genetics & Pl. Breeding         | Bose Institute-<br>BCKV | 1996               |
| MASTER'S   | M. Sc. (Ag.) in Genetics & Pl. Breeding        | BCKV                    | 1992               |
| BACHELOR'S | B. Sc. (Ag.) Hons.                             | BCKV                    | 1989               |

# 8. EMPLOYMENT HISTORY: (Starting from present position)

| POSITION        | ORGANIZATION | PERIOD       |              |
|-----------------|--------------|--------------|--------------|
|                 |              | From (Date)  | To (Date)    |
| Professor       | BCKV         | 10. 01. 2011 | Continue     |
| Assoc Professor | BCKV         | 10. 01. 2008 | 09.01.2011   |
| Reader          | BCKV         | 10. 01. 2005 | 09. 01. 2008 |
| Sr. Lecturer    | BCKV         | 10. 01. 2000 | 09. 01. 2005 |
| Lecturer        | BCKV         | 10. 01. 1996 | 09. 01. 2000 |

# 9. ADMINISTRATIVE POST(S)/ RESPONSIBILIY

| SL. NO. | NAME OF THE POST(S)/ RESPONSIBILITY   | PERIOD      |            |
|---------|---|-------------|------------|
|         |   | From (Date) | To (Date)  |
| 1       | Head of the Department  | 13.03.2001  | 17.02.2021 |
| 2       | Member of Faculty Council   | 13.03.2001  | 17.02.2021 |
| 3       | Chairman, BOS   | 13.03.2001  | 17.02.2021 |
| 4       | In-Charge, Central Instrumentation Centre   | 13.03.2001  | 30.09.2007 |
| 5       | Course Co-ordinator of DBT sponsored M. Sc. in Agricultural Biotechnology Programme | 2014        | 2020       |

### 10. AREA OF RESEARCH:

- Plant tissue culture and genetic modification of crop plants
- Marker assisted section

### 11. COURSES ASSOCIATED WITH:

| LEVEL         | COURSE NO. | COURSE TITLE                             | CREDIT |
|---------------|------------|--|--------|
|               |            |  |        |
| UNDERGRADUATE | ABT (H)    | Fundamentals of Plant Biotechnology      | 1+1    |
|               | ABT 304    | Principles and Practices of Agricultural | 1+1    |
|               |            | Biotechnology                            |        |
| POST GRADUATE | MBB 501    | Principles of Biotechnology              | 3+0    |
|               | MBB 502    | Fundamentals of Molecular Biology        | 3+0    |
|               | MBB 509    | Plant Tissue Culture                     | 2+1    |
| Ph.D.         | MBB 602    | Plant Genetic Engineering                | 3+0    |
|               | MBB 604    | Commercial Plant Tissue Culture          | 2+0    |
|               | MBB 606    | RNA Biology                              | 1+0    |
|               | MBB        | Seminar-II                               | 1+0    |

### 12. NUMBER OF STUDENTS SUPERVISED:

Master's: 5 (Five) Doctoral: 24 (Twenty four)

# 13. RESOURCE PERSON FOR OTHER INSTITUTES (extended services to others in various capacities)

- i) University of Calcutta, Ballygunge, Kolkata
- ii) Jadavpur University, Kolkata
- iii) Vidyasagar University, Midnapur
- iv) University of Kalyani, West Bengal
- v) Visva-Bharati University, Santiniketan, West Bengal
- vi) Uttarbanga Viswavidyalaya, Siliguri, West Bengal
- vii) Uttarbanga Krishi Viswavdyalaya, Cooch Behar, West Bengal
- viii) University of Putra, Malayasia
- ix) Bangladesh Agricultural University, Rajsahi
- x) Bangladesh Agricultural University, Mymensingh
- xi) Bihar Agricultural University, Sabur
- xii) Central Agricultural University, Imphal, Manipur
- xiii) Manipur University, Canchipur, Imphal
- xiv) Nagaland University, Medziphema
- xv) OUAT, Bhubaneswar, Orissa
- xvi) Assam Agricultural University, Jorhat
- xvii) TNAU, Coimbatore
- xviii) UAS, Bangalore
- xix) RKMVERI, Narendrapur, West Bengal
- xx) CPGSAS, Umiam, Barapani
- xxi) Swami Keshwanand Rajasthan Agricultural University, Bikaner
- xxii) Sister Nivedita University, Barrackpore, West Bengal
- xxiii) The Neotia University, Diamond Harbour, West Bengal
- xxiv) JIS University, Agarpara, West Bengal
- xxv) Swami Vivekananda university, Salt Lake, Kolkata

## 14. LIFE MEMBERSHIP OF ACADEMIC SOCIETIES:

- (i) Society for Plant Biochemistry & Biotechnology, New Delhi- 110 012.
- (ii) Society for Sciences, Dumka- 841 101
- (iii) The Indian Society of Genetics and Plant Breeding, New Delhi- 110 012
- (iv)Crop & Weed Science Society, Mohanpur, Nadia, West Bengal- 741252
- (v) Academy for Advancement of Agricultural Sciences, Kalyani, W.B-741235

## 15. PROJECT ACTIVITIES:

| SL. NO. | TITLE OF THE              | FUNDING | ONGOING/  | PI/ Co-PI |
|---------|---------------------------|---------|-----------|-----------|
|         | PROJECT                   | AGENCY  | COMPLETED |           |
| 1       | In-depth investigation on | DBT     | Completed | Co-PI     |
|         | biotic/abiotic elicitors  |         |           |           |
|         | mediated induced          |         |           |           |
|         | systemic resistance in    |         |           |           |
|         | rice-Rhizoctonia system   |         |           |           |
|         | under different agro-     |         |           |           |
|         | ecological region of West |         |           |           |
|         | Bengal                    |         |           |           |

# 16. CAPACITY BUILDING/FACULTY DEVELOPMENTPROGRAMME:

| SL. | NAME OF THE  | <b>DURATION</b>                   | PLACE   | ROLE    |
|-----|--|-----------------------------------|---|---------|
| NO. | PROGRAMME  |                                   |   |         |
| 1   | Recent Techniques on Molecular Biology and Biotechnology"  | Feb. 25 - to<br>March 12,<br>1997 | Centre of<br>Biotechnology,<br>I.A.R.I., New<br>Delhi               | Trainee |
| 2   | PCR Amplification and Cloning of Gene  | March 9 -<br>April 18,<br>2000    |   | Trainee |
| 3   | Ecofriendly utilization of solid<br>and liquid wastes of farm, urban<br>and industrial wastes for<br>agriculture | July 17 - to<br>Aug. 6, 2002      | Tamil Nadu<br>Agricultural<br>University,<br>Coimbatore             | Trainee |
| 4   | Application Training on Applied<br>Biosystems Real Time PCR<br>System  | September 2-<br>4, 2007           | LABINDIA Technical Training Centre, Gurgaon, Haryana                | Trainee |
| 5   | Winter school entitled "Research and development needs in transgenic era"  | December 11-31, 2008              | University of<br>Agricultural<br>Sciences,<br>Dharwad,<br>Karnataka | Trainee |

# 17. SEMINAR/ SYMPOSIUM/ WORKSHOP:

| SL. | NAME OF THE PROGRAMME  | DURATION                 | PLACE   | ROLE                   |
|-----|--|--------------------------|---|------------------------|
| 1   | International Symposium on "Hundred Years of Post- Mendelian Genetics and Plant Breeding- Retrospect and Prospects"        | November 6-9, 2001.      | IARI,<br>New Delhi  | Poster<br>Presentation |
| 2   | International Symposium on " Plant Biodiversity: Conservation and Evaluation"  | December 17-20, 2002     | Bose Institute,<br>Kolkata                                    | Poster<br>Presentation |
| 3   | National Symposium on"<br>Current trends in research on<br>microorganisms"   | February 15-<br>16, 2003 | University of<br>Calcutta,<br>Kolkata                         | Oral presentation      |
| 4   | National Conference on "Application of identified chemical and biological technologies in agriculture"                     | March 14-15, 2003        | Dept. of Life Science & Biotechnology, Jadavpur University    | Oral<br>presentation   |
| 5   | International Conference & Exposition on "WORLD HERBO EXPO-2004"   | January 12-<br>14, 2004  | Barkatullah<br>University, Bhopal                             | Oral presentation      |
| 6   | International Conference on "Environment & Development"  | February 4-8, 2004       | Science City,<br>Kolkata                                      | Poster presentation    |
| 7   | International Symposium on "Food security dilemma: Plant health and climate change issues"                                 | December 7-<br>9, 2012.  | BCKV, Kalyani   | Oral presentation      |
| 8   | National Seminar on<br>"Agriculture and bio-security<br>in changing scenario"  | February 1-3, 2014       | Institute of<br>Agriculture, Visva<br>Bharati, West<br>Bengal |                        |
| 9   | International Seminar on "Integrating Agriculture & allied research: Prioritizing future potential for secure livelihoods" | November 6-<br>9, 2014   | BCKV, Kalyani   | Oral presentation      |
| 10  | National Seminar on "Sustainable agriculture for food security and better environment"                                     | December 17-18, 2015.    | Farmers' Academy & Convention centre, BCKV                    | Oral presentation      |
| 11  | National Seminar on<br>"Resource based inclusive agriculture & rural development: Opportunities & Challenges"              | January 16-<br>17, 2016  | Vivekananda<br>University,<br>Narendrapur, West<br>Bengal     | Oral<br>presentation   |

| 12 | International Conference on "Agriculture, Food Science, Natural Resource Management and Environment Dynamics: The Technology, People and Sustainable Development" | August 13-<br>14, 2016         | Farmers' Academy & Convention centre, BCKV                               | Oral presentation   |
|----|---|--------------------------------|--|---------------------|
| 13 | International Symposium on<br>"Livelihood Promotion,<br>Biodiversity Conservation and<br>Social Security in Indian<br>Sundarbans" held during at                  | December 7-<br>9, 2018         | Jharkhali, South 24<br>Pgs,<br>West Bengal                               | Chaired a session   |
| 14 | International Seminar on "Agriskills for convergence in research industry & livelihood (ACRIL)"   | November 28 - December 1, 2019 | Farmers' Academy & Convention centre, BCKV                               | Rapporteur          |
| 15 | International Conference entitled "Application of Nanotechnology for Sustainable, Productive and Safer Agriculture and Food System"                               | November 5-6, 2020             | DBT-India and<br>TERI-Deakin<br>Nanobiotechnology<br>Centre, Gurugram.   | Virtual             |
| 16 | International Webinar on 'Role of legumes and pulses in sustainable cropping system of hot air Arid Zone'   | July 17, 2021                  | Swami<br>Keshawanand<br>Rajasthan<br>Agricultural<br>University, Bikaner | Attended<br>webinar |
| 17 | International seminar on<br>"Recent developmental trends<br>in Biological research"   | July 15, 2023                  | Acharya Prafulla<br>Chandra College,<br>New Barrackpore,<br>Kolkata      | Oral presentation   |

# 18. PATENTS/ HONOURS/ AWARDS/ RECOGNITION:

Received Honorary Fellowship from Society for Sciences and awarded Fellow of Society for Sciences (F.S. Sc) in 2003.

## 19. PUBLICATIONS:

### A. BOOK CHAPTERS

- Genetic diversity in some wild and cultivated germplasm in *Vigna* by molecular marker. In: Recent Trends in Horticultural Biotechnology, Vol. 2 (*eds.* R. Keshavachandran *et. al.*). **New India Publishing Agency**, New Delhi, (2007).
- Sustainable management of rice blast [*Magnaporthe grisea* (Hebert) Barr]: 50 years of research progress in molecular biology. In: Arya A and Perello AE (*eds.*) Management of fungal plant pathogens: Current trends and progress. **CAB International**, Nosworthy Way, Wallingford, Oxford, Oxford Shire, UK, Chapter 8, (2010).

- Single nucleotide polymorphism (SNP) marker for abiotic stress tolerance in crop plants. In: Advances in Plant Breeding Strategies, Vol. 2 (*eds.* JM Al-Khayri, M. Jain, DV Johnson). **Springer International Publishing**, Switzerland, (2016).
- Indirect regeneration of indica rice from mature seeds: The current scenario. In: Futuristic trends in Biotechnology. **IIP Procedings**, Vo. 2, Chapter 16 (2023).
- Biotechnological interventions in upscaling of plant secondary metabolites. In: Futuristic trends in Biotechnology. **IIP Procedings**, Vo. 2, Chapter 15, (2023).

## **B.** RESEARCH PAPERS (Best 10)

- 1. Gantait S, Mandal N, Bhattacharyya S, Das PK (2011) Induction and identification of tetraploids using *in vitro* colchicine treatment of *Gerbera jamesonii* Bolus cv. Sciella. **Plant Cell Tissue and Organ Culture** 106(3): 485-493. [NAAS: 9.0].
- 2. Gantait S, Mandal N, Das PK (2011) *In vitro* accelerated mass propagation and *ex vitro* evaluation of *Aloe vera* L. with aloin content and superoxide dismutase activity. **Natural Product Research** (Taylor & Francis) 25(14): 1340-1378. (**NAAS: 8.20**).
- 3. Gantait S, Sinniah UR, Mandal N, Das PK (2012) Direct induction of protocorm-like bodies from shoot tips, plantlet formation, and clonal fidelity analysis in *Anthurium andreanum* cv. CanCan. **Plant Growth Regulation** 67(3): 257-270. (**NAAS: 10.20**).
- 4. Kundu S, Salma U, Ali Md. N, Hazra AK and N Mandal (2018) Development of transgenic hairy roots and augmentation of secondary metabolites by precursor feeding in *Sphagneticola calendulacea* (L.) Pruski. **Industrial Crops & Products, 121**: 206-215. (NAAS: 11.90).
- 5. Salma U, Kundu S, Ali Md. N and Mandal N (2018) Augmentation of wedelolactone through *in vitro* tetraploid induction in *Eclipta alba* (L.) Hassk. **Plant Cell Tiss. Organ Cult.**, 133:289–298. (**NAAS:9.0**)
- 6. Salma U, Kundu S, Ali Md. N and Mandal N (2018) Elicitor mediated enhancement of wedelolactone in cell suspension culture of *Eclipta alba* (L.) Hassk. **Plant Cell Tiss. Organ Cult.**, 134: 409-421. (**NAAS: 9.0**).
- 7. Kundu S, Salma U, Ali Md. N and Mandal N (2018) *In vitro* tetraploidization for the augmentation of wedelolactone in *Sphagneticola calendulacea* (L.) Pruski. **Acta Physiol. Plant.**, 40: 215. (**NAAS: 8.60**).
- 8. Mitra M, Gantait S and Mandal N (2020) *Coleus forskohlii*: advancements and prospects of *in vitro* biotechnology. **Appl. Microbiol. Biotechnol.**, 104: 2359–2371. (NAAS:11.0).
- 9. Sutradhar M and Mandal N (2023) Reasons and riddance of Agrobacterium tumefaciens overgrowth in plant transformation. **Transgenic Res.** Online **Springer**, Doi.org/10.1007/s11248-023-00338-w. (**NAAS: 8.79**)
- 10. Sutradhar M, Singh BK, Samanta S, Ali M, Mandal N (2024) The overexpression of OsMed 37\_6, a mediator complex subunit enhances salt stress tolerance in rice.
   Biocatalysis and Agricultural Biotechnology, 58 (2024) 103212 (Elsevier, Online).(IF: 4.0)

M? am QD 31.5.2024