Curriculum Vitae

Name **DR SUDHAMOY MANDAL**

Designation **Principal Scientist (ARS)**
Crop Protection Division, ICAR-National Rice Research
Institute, Cuttack, Odisha, India

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Date of Birth January 05, 1969

Area of Specialization

- Systemic acquired resistance/phytoimmunity
- Plant transformation for broad spectrum disease resistance
- Host-pathogen interaction
- Application of AI-guided drones in crop health management

Education

- M Sc (IARI)
- Ph D (IIT)
- Fulbright Post-Doc (USA)

Professional History

Position held	Organization	Period
Current		
Principal Scientist (ARS)	ICAR-National Rice Research Institute, Cuttack	Aug. 20, 2018 – Present
Past		
Principal Scientist (ARS)	Central Horticultural Experiment Station (ICAR-IIHR), Bhubaneswar	Dec. 17, 2014 – Aug. 19, 2018
Senior Scientist (ARS)	Central Horticultural Experiment Station (ICAR-IIHR), Bhubaneswar	Dec. 17, 2008 – Dec. 16, 2014
Fulbright Scholar (on deputation)	University of Kentucky Lexington, USA	Aug. 24, 2012 – Oct. 14, 2012
	University of Nebraska Lincoln, USA	Oct. 15, 2012 – Aug. 23, 2013
Scientist (Senior Scale) (ARS)	Central Horticultural Experiment Station (ICAR-IIHR), Bhubaneswar	Dec. 2, 2006 – Dec. 16, 2008
Research Scholar (on study leave)	Indian Institute of Technology Kharagpur	Jan. 12, 2004 – Jan. 11, 2007
Scientist (ARS)	Central Horticultural Experiment Station (ICAR-IIHR), Bhubaneswar	Dec. 2, 1998 – Dec. 1, 2006

Publications

- Research papers International 14
- Research papers International 07
- Review papers 01
- Popular articles 16
- Books 01
- Technical bulletins 12
- Extension folders 11
- Book chapters (Springer and Nova Science) 02
- International conference papers 10
- National conference papers 13
- TV Talks 14

❖ *h*-index 11, *i10*-index 11 with more than 820 citations in international literature. Click the link to know more: https://scholar.google.co.in/citations?user=XfvonNUAAAAJ&hl=en

Awards and Recognitions

Name of the Award/Recognition	Organization	Year	Awarded/Recognized for
Fulbright Postdoctoral Research Fellowship Award	Fulbright Scholarship Program of US Dept of State	2012-2013	Postdoctoral research in University of Kentucky, Lexington and University of Nebraska, Lincoln, United States of America.

Certificate of Excellence in Reviewing	Elsevier	2013	An outstanding contribution to the quality of the international journal Physiological and Molecular Plant Pathology.
Award of Excellence in Scientific Services	ICAR- Indian Institute of Horticultural Research	2014	Scientific services (given annually through ICAR-IIHR level competition among all scientific staff).
Krushakbandhu (Farmers' Friend) Team Award	Odisha Krushak Samaj	2011	Distinct contribution in NAIP-SRLS project for livelihood improvement of farmers in Keonjhar district of Odisha.
Plenary Speaker	Dr Ambedkar College, Central Institute for Cotton Research, SAS College Nagpur	2020	Presenting a paper "International Year of Plant Health, Cutting Edge Science and Global Food Security" in the Interdisciplinary National Conference on Recent Innovations in Agri-Biosciences held in Nagpur during February 01, 2020.
Plenary Speaker	SK Porwal College Nagpur and Indian Association of Solid State Chemists and Allied Scientists Jammu	2019	Presenting a paper "Plant Nucleotide-Binding Leucine-Rich Repeat (NLR) Immune Receptors: From Discovery to Deployment " in 11th National Conference on Solid State Chemistry and Allied Areas held in Nagpur during December 20 - 21, 2019.
Chair of Poster Session	SK Porwal College Nagpur and ISCAS Jammu	2019	Chairing a poster session on Life Sciences in 11th National Conference on Solid state chemistry and allied areas held

			in Nagpur during December 20 - 21, 2019.
Invited Speaker	Dr Ambedkar College Nagpur	2016	Presenting a paper "Broad-Spectrum Systemic Immunity in Plants against Diseases" in the UGC Sponsored National Conference on Agri-Biosciences during February 26 - 27, 2016.
Senior Research Fellowship (SRF)	ICAR	1995	Ph D research work in IARI (not completed)
Junior Research Fellowship (JRF)	ICAR	1993	M Sc research work in IARI
National Eligibility Test (NET)	ICAR	1995, 1996	Eligibility for Assistant Professorship in Plant Pathology
Editorial Board Member	Academic Journals	2012-2018	Being a member of the Editorial Board of the African Journal of Plant Sciences
Editorial Team Member	Academic Journals	2012-2020	Being a member of the Editorial Team of the International Journal of Plant Physiology and Biochemistry
Member, Selection Committee	RC-CTCRI, Bhubaneswar	2012 - 2019	Selection of SRF, JRF, Field Assistant, Apprentice Trainees, etc
Chairman/Member, Selection Committee	CHES, Bhubaneswar	2012 - 2016	Selection of SRF, JRF, Field Assistant, Apprentice Trainees, etc
Chairman, Training and ToT Cell	CHES, Bhubaneswar	2008-2014	Organizing trainings, students' and farmers' visits to CHES, co-ordinating continuing education, post-graduate students' project works, etc.

Chairman/Member Technical Cell	CHES, Bhubaneswar	2007-2018	Compilation and editing of reports (monthly cabinet report, RAC report, QRT report, six-monthly progress report, IRC Report, Annual report) and other publications.
Chairman, Works and Estates Committee	CHES, Bhubaneswar	2010 - 2013	Supervision of developmental works and estate at CHES, Bhubaneswar.
Chairman, Farm Management Committee	CHES, Bhubaneswar	2011-2016	Managing entire gamut of farm-related works at CHES, Bhubaneswar.
Chairman, Publication Committee	CHES, Bhubaneswar	2014 - 2015	Scrutinizing all publication materials of CHES, Bhubaneswar.
Chairman, Central Laboratory Committee	CHES, Bhubaneswar	2014 - 2016	Creation and maintenance of central lab facility at CHES, Bhubaneswar.
Member, Research Advisory Committee	Krishi Vigyan Kendra (KVK), Rourkela	2013	Research Advisory Committee meeting
Research Project Reviewer	DST, Govt. of India	2010	Reviewing the project "Development of eco-friendly seed treatment technologies for successful plant establishment under less favourable environments"
Invited lectures as Resource Person	DoH, PPL, OUAT, SoH IIWM, etc.	2000 - 2015	Delivering lectures to Scientists, Govt Officers, Trainees, etc (more than 25 lectures delivered)
Peer Reviewer	Elsevier, Springer, Taylor & Francis, Blackwell, etc.	2007 - 2019	Reviewing research papers of various international journals
Ph D Thesis	Banasthali		Reviewing following thesis synopsis:

Synopsis Reviewer	Vidyapith, Rajasthan	2014 2015	i) Salicylic acid-induced tolerance in *Vigna mungo* to short term drought stress at early growth stage ii) Ethno-medicinal plants of Tonk district, Rajasthan: Study of current use, antimicrobial and antioxidant properties with special emphasis on phenolic acids
Research Supervisor	Utkal University, Bhubaneswar	2011-Contd.	Guiding research work of the students in the discipline of Biotechnology leading to Ph D degree of the university
Post-Graduate Faculty	IARI, New Delhi	2015-2018	Teaching in Plant Pathology and research guidance
First prize	Belda Gangadhar Academy	1985	Standing first in the essay competition on "Life and Message of Sri Ramakrishna"
Participation in Block Science Seminar	Govt. of WB and BITM (NCSM) GOI	1984	Participating in students' science seminar on "Environment and human survival"
First prizes	Asanda Siksha Niketan	1980-1985	Standing first through out in the classes from V to X

Crop Varieties Developed (Co-PI)

Crop	Accession name	Name of the variety	Salient characters
Mango	CHM-7	Arka Neelachal Kesri	Early maturity, high yielding, regular bearing, attractive colour
Ivy gourd	CHIG-15	Arka Neelachal Kunkhi	Extra long fruit, soft texture, high yield, suitable for salad also
	CHIG-33	Arka Neelachal Sabuja	High yield, hardy plant type, tolerance to bruising
Pointed	CHPG-15	Arka Neelachal Kirti	High yield, solid core, soft seed, high market

gourd				preference
Teasel gourd	CHTG-2	Arka Gaurav	Neelachal	High yield, soft seed, high market preference
Chilli	CHCL-92	Arka Prabha	Neelachal	Fruits mature in 65-75 days, fruits are dark green and medium long (5-6 cm), fruit yield 10.92 t/ha, suitable for red chilli.
Brinjal	CHBL-35 (IC 0598429)	Arka Shyama	Neelachal	An early high yielding variety with spreading growth, fruits round light green colour masked with light pink colour, yield-34.36 t/ha, soft fruit pulp, suitable for frying.
Inter-specific F1 hybrid – Teasle gourd (natural tetraploid) X Spine gourd (induced tetraploid)	IC 0598428	Arka Shanti	Neelachal	High yielding, long harvesting duration, sets fruits naturally through insect pollination, high culinary quality, can be easily propagated through adventitious root tubers, high yield.
Custard apple	CHCA-7	Arka Vikram	Neelachal	High yield potential, good fruit quality in terms of fruit weight, pulp content, seed content, TSS and shelf life.

Selected Publications

1. Sudhamoy Mandal, Adinpunya Mitra (2007). Reinforcement of cell wall in roots of *Lycopersicon esculentum* through induction of phenolic compounds and lignin by elicitors. Physiological and Molecular Plant Pathology;71:201-209.
Online access link: http://authors.elsevier.com/redirect/http://dx.doi.org/10.1016/j.pmpp.2008.02.003

2. Sudhamoy Mandal, Adinpunya Mitra (2008). Accumulation of cell wall-bound phenolic metabolites and their upliftment in hairy root cultures of tomato (*Lycopersicon esculentum* Mill.). Biotechnology Letters;30:1253-1258.
Online access link: http://www.springerlink.com/content/vpu2411633720453/

3. Sudhamoy Mandal, Adinpunya Mitra, Nirupama Mallick (2008). Biochemical characterization of oxidative burst during interaction between *Solanum lycopersicum* and *Fusarium oxysporum* f. sp. *lycopersici*. Physiological and Molecular Plant Pathology;72:56-61.
Online access link: http://authors.elsevier.com/redirect/http://dx.doi.org/10.1016/j.pmpp.2008.04.002

4. Sudhamoy Mandal, Adinpunya Mitra, Nirupama Mallick (2009). Time course study on accumulation of cell wall-bound phenolics and activities of defense enzymes in tomato roots in relation to *Fusarium* wilt. World Journal of Microbiology and Biotechnology;25:795-802.
Online access link: http://www.springerlink.com/content/64052830l111n851/

5. Sudhamoy Mandal, Nirupama Mallick, Adinpunya Mitra (2009). Salicylic acid-induced resistance to *Fusarium oxysporum* f. sp. *lycopersici* in tomato. Plant Physiology and Biochemistry;47:642-649.
Online access link:
http://authors.elsevier.com/redirect/http://dx.doi.org/10.1016/j.plaphy.2009.03.001

6. Arup K. Mukherjee, Shibani Ratha, Sujaya Dhar, Akhil K. Debata, Pradosh K. Acharya, Sudhamoy Mandal, Pratap C. Panda, Ajay K. Mahapatra (2010). Genetic relationships among 22 taxa of bamboo revealed by ISSR and EST-based random primers. Biochemical Genetics;48:1015-1025.
Online access link: http://www.springerlink.com/content/644705k8641555j1/

7. Sudhamoy Mandal (2010). Induction of phenolics, lignin and key defense enzymes in eggplant (*Solanum melongena* L.) roots in response to elicitors. African Journal of Biotechnology;9:8038-8047.
Online access link: http://www.academicjournals.org/AJB/PDF/pdf2010/22Nov/Mandal.pdf

8. Sudhamoy Mandal, Rupa Kumar Das, Sanjeev Mishra (2011). Differential occurrence of oxidative burst and antioxidative mechanism in compatible and incompatible interactions of tomato and *Ralstonia solanacearum*. Plant Physiology and Biochemistry;49:117-123.
Online access link: http://authors.elsevier.com/redirect/http://dx.doi.org/10.1016/j.plaphy.2010.10.006

9. Sudhamoy Mandal, Itishree Kar, Arup K. Mukherjee, Priyambada Acharya (2013). Elicitor-induced defense responses in *Solanum lycopersicum* against *Ralstonia solanacearum*. The Scientific World Journal; 2013:1-9.
Online access link: http://dx.doi.org/10.1155/2013/561056
10. Dilip K. Lakshman,, Savithiry Natarajan, Sudhamoy Mandal, Amitava Mitra (2013). Lactoferrin-derived resistance against plant pathogens in transgenic plants. Journal of Agricultural and Food Chemistry;61:11730-11735.
Online access link: http://pubs.acs.org/doi/abs/10.1021/jf400756t

11. Sudhamoy Mandal, Priyambada Acharya, Itishree Kar (2014). Reactive oxygen species signaling in eggplant in response to *Ralstonia solanacearum* infection. Journal of Plant Pathology;96:525-534.
Online access link: http://sipav.org/main/jpp/index.php/jpp/article/view/3181

12. Sudhamoy Mandal, Chiranjibi Rath, Chandan Kumar Gupta, Vishal Nath, Hari Shankar Singh (2015). Probing occurrence of phenylpropanoids in *Morinda citrifolia* in relation to foliar diseases. Natural Product Research;29:535-542.
Online access link: http://dx.doi.org/10.1080/14786419.2014.954245

13. Sudhamoy Mandal, Chandan Kumar Gupta (2016). Inducing cell wall-bound phenolic compounds in eggplant (*Solanum melongena*) by elicitors. Applied Biochemistry and Microbiology;52:650-656.
Online access link: http://dx.doi.org/10.1134/S0003683816060120

14. Sudhamoy Mandal, Ramesh C Ray (2010). Reactive Oxygen Species and Antioxidative Mechanisms during Tomato-Pathogen Interactions. *In*: Aubé ED, Poole FH, eds. Tomatoes: Agricultural Procedures, Pathogen Interactions and Health Effects (ISBN: 978-1-60876-869-1). Nova Science Publishers, Inc., New York. pp. 161-172.
Online access link: https://www.novapublishers.com/catalog/product_info.php?products_id=11139

15. Sudhamoy Mandal, Ramesh C Ray (2011). Induced systemic resistance in biocontrol of plant diseases. *In*: Singh A, Parmar N, Kuhad RC, eds. Bioaugmentation, Biostimulation and Biocontrol (ISBN: 978-3-642-19768-0). Springer-Verlag Berlin Heidelberg. pp. 241-260.
Online access link: http://www.springerlink.com/content/m20051t7l5v23721/