


Staff Details

Title	DR.	First Name	MANAS	Last Name	TRIPATHY	Photograph
Designation	Assistant Professor (OES-I)					
Department	Botany					
Phone Number (M)	07735163057					
Email	mktripathy@gmail.com					
	<p>Google Scholar: https://scholar.google.com/citations?user=0JhelcQAAAAJ&hl=en</p> <p>Orcid: https://orcid.org/0000-0002-8044-5696</p> <p>Researchgate: https://www.researchgate.net/profile/Manas-Tripathy-2</p>					
Educational Qualifications						
Subject	Institution		Year	Details		
Ph.D.	International Centre for Genetic Engineering and Biotechnology (I.C.G.E.B) New Delhi, India and University of Delhi, Delhi, India		2013	Plant Molecular Biology and Biotechnology Thesis Title: Functional validation of a small GTP- binding protein PgRab7 in rice for abiotic stress tolerance Supervisors: 1. Padma Shri Prof. Sudhir K. Sopory (Ex-JNU VC, Ex-Director-ICGEB) 2. Prof. Renu Deswal (DU)		
PG	Berhampur University, Odisha, India		2001	Botany (Special Papers: Plant Physiology and Biochemistry) First Division: 72%		
UG	Utkal University, Odisha, India		1999	Botany (Hons.), Chemistry, Zoology, English, Odia, Polymer Science First Division with Distinction: 62.3%		
Certificate in Computing (CIC)	Indira Gandhi National Open University (IGNOU), New Delhi, India		2003 (January - June)	Subjects: The Context, The Technology, The Applications, Microsoft office		

Professional Experiences			
Organisation/ Institution	Designation	Duration	Role
Government Science College, Chatrapur-761020, Ganjam, Odisha, INDIA	Assistant Professor-Botany (Odisha Educational Service)	January 2024-Continuing	Teaching UG, PG courses. Counsellors, Youth Red Cross (YRC) Coordinator, College Website Development NAAC Member
Texas Crop Science LLC, Austin, Texas-78705, USA	Special Consultant	July 2022 - June 2023	Worked on biological data analysis and manuscript writing for publication in international journals
Institute of Life Sciences (ILS), Bhubaneswar-751023, Odisha, INDIA and Department of Plant Molecular Biology, University of Delhi South Campus, New Delhi 110021, INDIA	CSIR-Senior Research Associate (Scientist's Pool Scheme)	July 2019- June 2022	Research and Development (Pant Biotechnology-CRISPR/cas Genome editing, Transgenic Research)
Department of Biotechnology, National Institute of Technology, Durgapur, West Bengal-713209, INDIA	Research Associate	2018 - 2019	Research and Development (Pant Molecular Biology)
Department of Agronomy, Iowa State University, Ames, Iowa- 50011, USA	Postdoctoral Research Associate	2017	Research and Development (Pant Biotechnology-Pathology)
Department of Molecular Biosciences, The University of Texas at Austin, Austin, Texas-78712, USA	Postdoctoral Fellow	2014- 2017	Research and Development (Pant Molecular Biology)
Department of Biosciences, Indian Institute of Science Education and Research, Bhopal-462066, INDIA	Postdoctoral Fellow	2013- 2014	Research and Development (Molecular Biology-Chromatin Remodeling)
School of Life Sciences, Jawaharlal Nehru University, New Delhi-110067, INDIA	Junior Research Fellow	2003-2006	Research and Development (Pant Molecular Biology)

Teaching Experience (Subjects/Courses Taught)
Teaching UG, PG courses (Analytical Techniques in Plant Sciences, Plant Physiology, Biochemistry, Molecular Biology, Biotechnology, Paleobotany, Applied Mycology, Horticulture)
Honors & Awards
Awarded as Best Poster Presentation at P. Parija Memorial National Conference on Recent Advances in Plant Biotechnology at Department of Botany, Ravenshaw University, Odisha, INDIA in 2012
Publications
<p>Published, peer-reviewed</p> <p>*Corresponding author</p> <ol style="list-style-type: none"> 11. Chourdary, S., Kumawat, G., Kher, K., Baroliya, P.K., Gupta, A.K., Tripathy, M.K* and Harish* (2024). Green synthesis of palladium nanoparticles using <i>Asterarcys</i> sp. and their applications. Nano TransMed, 100046 10. Jamra, G., Ghosh, S., Singh, N., Tripathy, M.K., Aggarwal, A., Rajan Singh, R.D., Srivastava A.K., Kumar A and Pandey, G.K (2024). Ectopic expression of Eleusine coracana CAX3 confers tolerance to metal and ion stress in yeast and Arabidopsis. Plant Physiology and Biochemistry. 108613. DOI: 10.1016/j.plaphy.2024.108613 I. F- 6.5 9. Tripathy, M.K and Roux, S.J. (2023). Role of calcium in regulating key steps in phytochrome-induced signaling pathways. Physiology and Molecular Biology of Plants. 29:1875-1879. DOI:10.1007/s12298-023-01403-8 I.F- 3.5 8. Clark, G., Tripathy, M.K and Roux, S.J. (2023). Growth regulation by apyrases: insights from altering their level of expression in yeast, Arabidopsis and soybeans. Plant Physiology. kiad590. DOI: 10.1093/plphys/kiad590 I.F- 6.5 7. Bansal, S[#]., Sundararajan, S[#]., Shekhawat, P.K., Singh S., Soni, P., Tripathy M.K* and Ram, H* (2023). Rice lipases: a conundrum in rice bran stabilization: A review on their impact and biotechnological interventions. Physiology and Molecular Biology of Plants. 29, 985-1003. DOI: 10.1007/s12298-023-01343-3 I.F- 3.5 6. Clark, G., Brown, KA., Tripathy, M.K and Roux, S.J. (2021). Recent Advances Clarifying the Structure and Function of Plant Apyrases (Nucleoside triphosphate diphosphohydrolases). International Journal of Molecular Sciences, 22, 3283. DOI: 10.3390/ijms22063283 I.F- 4.9 5. Tripathy, M.K*., Deswal, R and Sopory, S.K. (2021). Plant RABs: role in development and in abiotic and biotic stress responses. Current Genomics, 22:26-40. I.F- 2.6 4. Tripathy, M.K., Weeraratne, G., Clark, G and Roux, S.J. (2017). Apyrase inhibitors enhance the ability of diverse fungicides to inhibit the growth of different plant pathogenic fungi. Molecular Plant

Pathology, 18:1012-1023. DOI: 10.1111/mpp.12458 I.F- 4.8

3. **Tripathy, M.K***, Tiwari, B.S., Reddy, M.K., Deswal, R and Sopory, S.K.* (2017). Ectopic expression of PgRab7 in rice plants (*Oryza sativa* L.) results in differential tolerance at the vegetative and seed setting stage during salinity and drought stress. **Protoplasma**, 254:109-124. DOI: 10.1007/s00709-015-0914-2 I.F- 3.186
2. Singh, B.N., Mudgil. Y., Jhon, R., Achary, V.M., **Tripathy, M.K.**, Sopory, S.K., Reddy, M.K and Kaul, T. (2015). Cell cycle stage-specific differential expression of topoisomerase I in tobacco BY-2 cells and its ectopic overexpression and knockdown unravels its crucial role in plant morphogenesis and development. **Plant Science**, 240:182-192. DOI: 10.1007/s00709-015-0914-2 I.F- 5.2
1. **Tripathy, M.K.**, Tyagi, W., Goswami, M., Kaul, T., Singla-Pareek, S.L., Deswal, R., Reddy, M.K and Sopory, S.K. (2012). Characterization and functional validation of tobacco PLC delta for abiotic stress tolerance. **Plant Molecular Biology Reporter**, 30:488-497. Doi.org/10.1007/s11105-011-0360-z I.F- 2.1

Book Chapters

5. Sethi, L. and **Tripathy, M.K*** (2024) Application of CRISPR for plant-mediated resistance. Ashwani Kumar, Sudipti Arora, Shinjiro Ogita, Yuan- Yeu Yau and Krishnendu Mukherjee (eds.), Gene editing in plants: CRISPR-Cas and its applications. Publisher: Springer Singapore, P309-332. ISBN 978-981-99-8528-9
4. **Tripathy, M.K*** and Sopory, S.K. (2023). Developing Stress-Tolerant Plants. Role of Small GTP Binding Proteins (RAB and RAN). Mohammad Wahid Ansari, Anil Kumar Singh, and Narendra Tuteja (eds.), Global Climate Change and Plant stress Management. Publisher: Wiley P229-240. ISBN: 978-1-119-85852-2
3. Sherpa, T., Kumari, K., Jha, D., **Tripathy, M.K** and Dey, N (2023). CRISPR/Cas based genome editing and its possible implication in bamboo research. Malay Das, Liuyin Ma, Amita Pal, Chittaranjan Kole (eds.), Genetics, Genomics and Breeding of Bamboos. CRC Press/Taylor & Francis Group. P338-353, ISBN: 9781003287605
2. Kaur, K[#], **Tripathy, M.K[#]** and Pandey, G.K. (2020). Role of Dual Specificity Phosphatase in Stress and Starch Metabolism. G. K. Pandey (ed.), Protein Phosphatases and Stress Management in Plants, Springer Nature Switzerland AG. P331-351, ISBN: 978-3-030-48733-1 [#] Authors contributed equally
1. **Tripathy, M.K.**, Reddy, M.K., Deswal, R and Sopory, S.K. (2013). Towards developing transgenic rice for salinity and drought tolerance: role of Rab7. In: Muralidharan K and Siddiq EA, eds. 2013. International dialogue on perception and prospects of designer rice. Society for advancement of rice research, Directorate of rice research, Hyderabad 500030, India, P228-237. ISBN: 978-81-926809-0-3.

Public Service / University Service / College Service /Consulting Activity/College
Committee members

- ❖ Member, Board of Studies, Department of Botany, Salepur Autonomous College, Salepur, Cuttack, Odisha
- ❖ External Examiner, Practical Papers in different degree colleges.
- ❖ Counsellor, Youth Red Cross (YRC), Government Science College, Chatrapur, Ganjam, Odisha, India
- ❖ Coordinator, College Website Development, Government Science College, Chatrapur, Ganjam, Odisha, India
- ❖ Member, NAAC Team, Government Science College, Chatrapur, Ganjam, Odisha, India

Professional Societies Memberships

- ❖ Member, American Society of Plant Biologists (ASPB)

Projects (Major Grants/Collaborations)

NA

Other Details if any

SCIENTIFIC JOURNAL REVIEWER

- ❖ Plant Physiology and Biochemistry (ISSN: 0981-9428), Elsevier
- ❖ Protoplasma (ISSN: 0033183X, 16156102), Springer
- ❖ Biodiversity and Conservation (ISSN 0960-3115, 1572-9710), Springer
- ❖ Frontiers in Plant Science (ISSN 1664-462X)

INVITED TALK/CONFERENCE PRESENTATIONS

- ❖ Oral presentations
 - Invited talk titled “**Role of small GTP-binding protein (RAB7) in abiotic stress tolerance**” presented at Department of Botany, Salepur Autonomous College, Cuttack, Odisha, India in 2024
 - Invited talk titled “**Role of Apyrase enzyme inhibitors in modern fungicide development**” presented at Department of Botany, Salepur Autonomous College, Cuttack, Odisha, India in 2021
- ❖ Poster presentations
 - Poster titled “**Modified apyrase altered nuclear functions leads to changes in the gene expression and growth in Yeast and Arabidopsis**” was presented at the International Conference on Food and Nutritional Security, jointly organized by National Agri-Food Biotechnology Institute (NABI), Mohali;

Center of Innovative and Applied Bioprocessing (CIAB), Mohali; Indian Society for Plant Physiology (ISPP), New Delhi; Plant Tissue Culture Association of India (PTCA-I), Lucknow; International Center for Genetic Engineering and Biotechnology (ICGEB), New Delhi and ICAR-National Institute of Plant Biotechnology (ICAR-NIPB), New Delhi, India in 2023.

- Poster titled “**Transcriptome analysis of *PgRab7* overexpressing transgenic rice plants in response to salinity and drought stress**” was presented at the 4th International Plant Physiology Congress (IPPC-2018), organized by CSIR-National Botanical Research Institute, Lucknow, India and Indian Society for Plant Physiology, New Delhi, India in 2018.
- Participated conference on “**Plant responses to light and stress: Emerging issues in climate change**” which took place at International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi, India in 2018.
- Poster titled “**Expression of an apyrase gene (*psNTP9*) with modified calmodulin binding enhances phosphate uptake in yeast, hairy roots of maize, soybean, and canola**” was presented at International conference on plant developmental biology at National Institute of Science Education and Research, Odisha, India in 2017.
- Poster entitled “**Fungicide potency increased by apyrase inhibitors to inhibit the growth of different plant pathogenic fungi**” was presented at Plant Biology (ASPB) at Austin, Texas, USA in 2016.
- Poster entitled “**Functional validation of a small GTP-binding protein *PgRab7* in rice for abiotic stress tolerance**” was presented at P. Parija Memorial National Conference on Recent Advances in Plant Biotechnology at Department of Botany, Ravenshaw University, Odisha, India in 2012. (**Awarded as Best Poster Presentation**)
- Poster entitled “**Physiological bioindicators of lake Chilika ecosystem**” was presented at International conference on Trends in cellular and molecular biology at Jawaharlal Nehru University, New Delhi, India in 2003.

WEBINAR ATTAINED

- A Webinar entitled “**Our Environment Our Future**” was organised by Department of Botany, Dhenkanal Mahila Mahavidyalaya on World environment day on June, 5th 2024.

WORKSHOP ATTAINED

- Course on “Advanced Microscopy and Imaging Techniques” held on December, 2013.
Department of Biological Sciences, Indian Institute of Science Education and Research, Bhopal-462023, India
- SERB School on “Introduction to Systems and Synthetic Biology for Scientists and Engineers” held on April, 2013.
Department of Chemical Engineering, Indian Institute of Technology Bombay, Mumbai, India
- Advance Course on Confocal Microscopy and Imaging 2009

International Centre for Genetic Engineering and Biotechnology, New Delhi, India.

TRAINING PROGRAMME ATTAINED

- The National Education Policy of India 2020 (**NEP 2020**) Orientation & Sensitization Programme under Malaviya Mision Teacher Training Programme (MMTTP) of University Grants Commision (UGC), India Organized by Malaviya Mision Teacher Training Centre, Utkal University, Bhubaneswar, Odisha from May 6th to 18th, 2024.
 - State Level Training Programme for Untrained YRC Counsellors held at Red Cross Bhavan, Bhubaneswar, Odisha from June 10th to 12th 2024.
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