

Dr. Jithesh MN

Assistant Professor

Specialization

Plant Molecular Biology

Affiliation

Assistant Professor, School of Sciences, JAIN (Deemed-to-be University)



Education

- 2006 - Ph.D., M S Swaminathan Research Foundation, University of Madras

Teaching Experience: 11 years

Research Experience: 20 years

Post-PhD Work Experience

- 2016 onwards JAIN (Deemed-to-be University), Bengaluru
- 2012-2016 – Senior Scientist, SCMS Institute of Bioscience & Biotechnology - Research & Development (SIBB-R&D), Kochi, Kerala
- 2009-2012 – Principal Scientist, Pondicherry Biotech Pvt Ltd, Pondicherry
- 2006-2009– Post Doctoral Research Scientist, Department of Plant Sciences, Dalhousie University, Faculty of Agriculture, Canada.

Key Areas of Research

- Plant stress biology
- Priming response in plants
- Interface between biotic and abiotic stress
- Free radicals in plants
- Synthetic genes and biology

Publications

1. Kruthika, N., **Jithesh, M.N (2022)**. Response of rice to salinity risk- from a physiological outlook to laboratory focussed experimental approach. **Cereal Research Communications**. <https://doi.org/10.1007/s42976-022-00291-0>.
2. S. Sabina and **M.N. Jithesh (2021)**. Mechanical wounding of leaf midrib and lamina elicits differential biochemical response and mitigates salinity induced damage in tomato. **Journal of Applied Horticulture** 23(1): 3-10.

3. S Sabina and **MN Jithesh (2020)**. Mechanical rubbing of tomato internode influence stem growth, improve tensile strength but negatively impact flavonoid levels. **Advances in horticultural science** 34 (4), 373-380.
4. **Jithesh, MN.**, Shukla, P. S., Kant, P., Joshi, J., Critchley, A. T., and Prithiviraj, B. (2019). Physiological and transcriptomics analyses reveal that *Ascophyllum nodosum* extracts induce salinity tolerance in *Arabidopsis* by regulating the expression of stress responsive genes. **J Journal of Plant Growth Regulation**.38, 463–478.
5. **Jithesh M N et al (2012)** Analysis of seaweed extract induced transcriptome leads to identification of a negative regulator of salt tolerance in *Arabidopsis*. **HortScience**. June 2012 47:704-709.
6. Wajahat Khan, Usha P, Sowmya S, **Jithesh MN et al (2009)** Seaweed extracts as biostimulants of plant growth and development. **Journal of Plant growth Regulation**, December 2009, Volume 28, Issue 4, pp 386-399.
7. Prasanth R, **Jithesh MN et al (2008)** Rapid bioassays to evaluate the plant growth promoting activity of *Ascophyllum nodosum* (L.) Le Jol. Extracts using a model plant, *Arabidopsis thaliana* (L.) Heynh. **Journal of Applied Phycology** 20 (4) 423-429.
8. Ganesan G, Sankararamasubramanian HM, **Narayanan JM et al (2008)** Transcript level characterization of a cDNA encoding stress regulated NAC transcription factor in the mangrove plant *Avicennia marina*. **Plant Physiology and Biochemistry**. 46 (10): 928-934.
9. **Jithesh MN et al (2006)** Antioxidative response mechanisms-evidence for stress protection in halophytes. **Journal of Genetics** 85(3): 237-254.
10. **Jithesh MN et al (2006)** Monitoring expression profiles of antioxidant genes to salinity, iron, oxidative, light and hyperosmotic stresses in the highly salt tolerant gray mangrove, *Avicennia marina* (Forsk.) Vierh by mRNA analysis. **Plant Cell Reports** 5(8): 865-876. Journal Impact factor (2008): 1.946.
11. P. Senthilkumar, **Jithesh MN et al (2005)** Salt stress effects on the accumulation of vacuolar H⁺-ATPase subunit c transcripts in wild rice, *Porteresia coarctata* (Roxb.) Tateoka. **Current Science** 89: 1386-1394.
12. Ramasamy EV, Gajalakshmi S, Sanjeevi R, **Jithesh MN**, Abbasi SA (2004) Feasibility studies on the treatment of dairy wastewaters with upflow anaerobic sludge blanket reactors. **Bioresource Technology**. 93(2): 209-212.
- 13 Parani M, **Jithesh MN**, Lakshmi M and Parida A (2002). Cloning and Characterization of a gene encoding Ubiquitin Conjugating enzyme from the Mangrove species, *Avicennia marina* (Forsk.) vierh. **Indian**

Journal of Biotechnology 1: 164-169.

14. Lakshmi M, Senthilkumar P, Parani M, **Jithesh MN**, Parida A (2000). PCR-RFLP analysis of chloroplast gene regions in *Cajanus* (Leguminosae) and allied genera. **Euphytica**. 116: 243-250.

15. Senthilkumar P, Parani M, Lakshmi M, **Jithesh, MN** and Parida A (1999) Histone H3 gene from *Porteresia coarctata*. (Accession No. AF109910) (PGR99-023). Plant Gene Register. **Plant Physiology**. 119: 806. Gene Register.

16. **Jithesh, MN et al** (1996). Studies on the Haemocyanin of *Pila globosa*. **Indian journal of Comparative Animal Physiology**. 96: 52-59.

Research Achievements

Awarded the **Postdoctoral Research Program**– 2006 by scheme jointly constituted by Rajiv Gandhi Centre for Biotechnology (RGCB an autonomous DBT institute) and Kerala State Council for Science, Technology and Environment (KSCSTE) in Biotechnology, Trivandrum.

Awarded the **UNESCO-Biotechnology Action Council Research Support (UNESCO-BAC)** - 2003, to work in Department of Biological Sciences, Dartmouth College, Hanover, USA.