



# Dr. Jisha KC

Assistant Professor  
Department of Botany  
MES Asmabi College,  
P. Vemballur

## ACADEMIC QUALIFICATIONS

- PhD Botany 2015
- MPhil Botany 2009
- NET
- MSc Applied Plant Science
- BSc Plant Science

## CONTACT

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## SPECIALIZATION

- Plant Stress Physiology
- Phytochemistry
- Mycology

## LANGUAGE

- English
- Hindi
- Malayalam

## EXPERIENCE

- Assistant Professor in Botany
- 2015 onwards

## PUBLICATIONS

▮ Paper publications in  
Journals- 21

▮ Book/Chapters- 6

▮ Proceedings- 8

▮ Presentations- 15

**Academic Qualification (Undergraduate Onwards)**

	Degree	Year	Subject	University/Institution	% of marks
1.	BSc	2004	Plant Science	University of Calicut	89% (I Rank)
2.	MSc	2006	Applied Plant Science	University of Calicut	80% (II Rank)
3.	MPhil	2009	Botany	University of Calicut	B+
4.	PhD	2015	Botany	University of Calicut	NA

**Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award:**

- **Title of PhD:** Studies on the influence of various seed priming methods for abiotic stress tolerance in *Oryza sativa* (L.) and *Vigna radiata* (L.) Wilczek
- **Guide's Name:** Dr. Jos T. Puthur
- **University:** University of Calicut
- **Year of Award:** 2015

**Publications (List of papers published in Journals, in year wise descending order).**

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1	Sumitha Thomas and Jisha K.C	Seed priming: An efficient method for enhancing growth and yield of <i>Sesamum indicum</i> L. under drought stress	Journal of Stress Physiology & Biochemistry	19(4)	107-112	2023
2	Rahana P.I., Shahana P. and Jisha K.C	Seed priming: An efficient method for enhancing growth and yield of <i>Sesamum indicum</i> L. under drought stress	Journal of Stress Physiology & Biochemistry	19(2)	114-123	2023
3	Jisha KC and Sadiya EI	Heavy Metal Accumulation and Metabolic Changes Associated with Pollution in <i>Vernonia cinerea</i> (L.) Less. Growing Under Ecologically Different Habitats	Journal of Stress Physiology & Biochemistry	17	5-12	2021
4	Neema P. and Jisha K.C.	Physiological and Biochemical Responses of <i>Aerva lanata</i> (L.) Juss. ex Schult. under Heavy Metal Stress	Journal of Stress Physiology & Biochemistry	16	67-73	2020
5	Athira K.V. and Jisha K.C.	Heavy Metal Stress Tolerance Potential	Journal of Plant Science & Research	7	192-	2020

		Evaluation of Two Halophytes - <i>Avicennia officinalis</i> L. and <i>Rhizophora Mucronata</i> Poir. In Lam			196	
6	Ardra P. ., Ameesha M.M. . and Jisha K.C.	Effects of Soft Drinks on Seed Germination and Early Seedling Growth of <i>Vigna radiata</i> (L.) Wilczek	Meridian	9	64-75	2020
7	Shahina, Famitha Ubaid and Jisha K.C.	Effects of chromium on seed germination and early seedling growth of <i>Vigna radiata</i> (L.) Wilczek,	Meridian	9	12-18	2020
8	Nusreen Banu N. K., Roopa Reghunathan K. R. and Jisha K.C	Effects of chilling on seed germination and early seedling growth of <i>Vigna radiata</i> (L.) Wilczek	Meridian	8	11-17	2019
9	K. C. Jisha & Jos T. Puthur	Seed Hydropriming Enhances Osmotic Stress Tolerance Potential in <i>Vigna radiata</i>	Agricultural Research	7	145-151	2018
10	Shiji T.M. and Jisha K.C.	Effects of Air Pollution on the Foliar Characters of Asteraceae Members in Kodungallur.	Meridian	7	12-22	2018
11	Roshitha M.R. and Jisha K.C.	Comparative studies on the effects of different fertilizers on the growth and yield of <i>Lycopersicon esculentum</i> Mill.	Meridian	7	3-11	2018
12	Rahana P.I. and Jisha K.C.	Halopriming: An effective approach to enhance the NaCl tolerance potential of <i>Sesamum indicum</i> L.,	Meridian	6	15-29	2017
13	Jisha, K.C. & Jos T. Puthur	Seed priming with BABA ( $\beta$ -amino butyric acid): a cost effective method of abiotic stress tolerance in <i>Vigna radiata</i> (L.) Wilczek.	Protoplasma	253	277-289	2016
14	Jisha, K.C. & Jos T. Puthur (2016)	Seed Priming With Beta-Amino Butyric Acid (BABA) Improves Abiotic Stress Tolerance in Rice Seedlings	Rice Science	5	242-254	2016
15	K. Vijayakumari, K. C. Jisha & Jos T. Puthur	GABA/BABA priming: a means for enhancing abiotic stress tolerance potential of plants with less energy investments on	Acta Physiologiae Plantarum	38	230-241	2016

		defence cache				
16	Jisha, K. C., Faseela P. and Jos T. Puthur	Effects of halopriming on photochemistry of <i>Vigna radiata</i> (L.) Wilczek subjected to osmotic stress	Meridian	5	26-31	2016
17	Adhra P.P., Razanath Beevi S. A. and Jisha K.C.	Comparative studies on the NaCl tolerance potential of three rice varieties	Meridian	5	60-65	2016
18	Jisha, K.C. & Jos T. Puthur	Seed halopriming  outdo hydropriming in enhancing seedling vigour and osmotic  stress tolerance potential of rice varieties.	Journal of Crop  Science and Biotechnology	17	209- 219	2014
19	Jisha, K.C. & Jos T. Puthur	Halopriming of seeds  imparts tolerance to NaCl and PEG induced stress in <i>Vigna radiata</i> (L.) Wilczek varieties	Physiology and Molecular  Biology of Plants	20	303- 312	2014
20	Jisha K.C., Vijayakumari K. and Jos T. Puthur	Seed priming for Abiotic Stress Tolerance: an Overview	Acta  Physiologiae Plantarum	35	1381- 1396	2013
21	T.K. Arun Kumar, Jisha K. Chandran, Jisha E.  Sreekandan & Patinjareveetil Manimohan	Isolation  and invitro cultivation of <i>Auriculoscypha anacardiicola</i> D. A.  Reid et Manim., an insect associated and potentially medicinal  fungus from India.	International Journal of Medicinal  Mushrooms	13	273- 280	2011

**Books/Reports/Chapters/General articles etc.**

S.No	Title	Author's Name	Publisher	Year of Publication
1	Crop Improvement of Ginger ( <i>Zingiber officinale</i> Rosc.) through biopriming	Sumitha Thomas & Jisha KC	MES Asmabi College, P. Vemballur	2023
2	Priming enhances tolerance to waterlogging stress in turmeric varieties ( <i>Curcuma longa</i> L.)	Athira TR & Jisha KC	MES Asmabi College	2023
3	Algae: Source of Biofuel and Phytoremediation	Aliya NK, Jijeesh CM and Jisha KC	Taylor & Francis Group CRC Press	2022
4	Bo-priming: A revolutionary thought against chemicals based crop improvement	Sumitha Thomas and Jisha KC	Notion Press	2022
5	Ecological importance of Wetland Systems	Jisha KC and Jos T. Puthur	John Wiley and Sons	2021
6	GABA/BABA Priming Causes Signaling of Defense Pathways Related to Abiotic Stress Tolerance in Plants, <i>in</i> Neurotransmitters in plants	Jisha KC and Jos T. Puthur	Taylor & Francis Group CRC Press	2018

**Publications as proceedings of conferences and seminars:**

- Influence of chemical priming on the growth of *Zingiber officinale* Rosc., **Sumitha Thomas and Jisha KC**, PPVII.6. XLIV All India Botanical Conference of the Indian Botanical Society, Jyai Narain University, Jodhpur, Rajasthan, 18<sup>th</sup> to 20<sup>th</sup> October 2021
- Priming mediated biotic stress tolerance in *Curcuma longa* L., **T.R. Athira and K.C. Jisha**, Proceedings of the International Conference on Plant Physiology & Biochemistry, January 19<sup>th</sup> and 20<sup>th</sup> 2022
- Phytoremediation Potential Evaluation of Four Selected Aquatic Macrophytes, **Shahanas NS and Jisha KC**, Bio Episteme: An Anthology of Research Papers in Science, MESMAC International Conferences 2019
- Priming in ginger (*Zingiber officinale* Rosc.) for crop improvement and mitigating transient waterlogging,

**Sumitha Thomas and Jisha KC**, International seminar on gingers 2023, held at MBDIPS Kozhikode on 1<sup>st</sup> – 3<sup>rd</sup> March 2023

- Crop Improvement of Ginger (*Zingiber officinale* Rosc.) Through Biopriming’ **Sumitha Thomas and Jisha KC**, NCIATRI Abstracts 2023. ISBN 978-93-5813-509-1 proceedings of the National conference on Interdisciplinary Academic Translational Research and Innovation 2023, held at MES Asmabi College, P. Vemballur, Thrissur, Kerala on 7<sup>th</sup> and 8<sup>th</sup> 2023.
- Priming enhances tolerance to waterlogging stress in turmeric varieties (*Curcuma longa* L.) **Athira TR and Jisha KC**, NCIATRI Abstracts 2023. ISBN 978-93-5813-509-1 proceedings of the National conference on Interdisciplinary Academic Translational Research and Innovation 2023, held at MES Asmabi College, P. Vemballur, Thrissur, Kerala on 7<sup>th</sup> and 8<sup>th</sup> 2023.
- Efficacy of different priming methods in mitigating the transient waterlogging in *Zingiber officinale* Rosc. **Sumitha Thomas and Jisha KC**, Physiological and Molecular Mechanisms of Abiotic Stress Tolerance in Plants, University of Calicut and Indian Society of Plant Physiology (South Zone) On 26-28 October 2022.
- Priming strategies for improving waterlogging tolerance in two different turmeric varieties (*Curcuma longa* L.) **Athira TR and Jisha KC**, Physiological and Molecular Mechanisms of Abiotic Stress Tolerance in Plants, University of Calicut and Indian Society of Plant Physiology (South Zone) On 26-28 October 2022.

Sl. No	PRESENTATIONS TITLE OF THE EVENT AND VENUE	ORAL/ POSTER	AUTHORS	TITLE OF PRESENTATION	INTERNATIONAL / NATIONAL	PERIOD
1.	XLIV All India Botanical Conference of the Indian Botanical Society, Jai Narain University, Jodhpur, Rajasthan,	Poster	Sumitha Thomas and Jisha KC	Influence of chemical priming on the growth of <i>Zingiber officinale</i> Rosc	National Conference	18 <sup>th</sup> -20 <sup>th</sup> October 2021
2.	National Conference of plant physiology (NCPP-2021) on “Frontiers of plant physiology for climate-smart agriculture”, organized by ICAR – National Institute of Abiotic stress management, Pune, India and Indian Society for plant physiology, New Delhi, India	Poster	Athira TR and Jisha KC	Chemical priming: An approach to induce disease resistance in <i>Curcuma longa</i> L.	National Conference	09-11 Dec 2021

3.	Physiological and Molecular Mechanisms of Abiotic Stress Tolerance in Plants, University of Calicut and Indian Society of Plant Physiology (South Zone)	Oral	Sumitha Thomas and Jisha KC	Efficacy of different priming methods in mitigating the transient waterlogging in <i>Zingiber officinale</i> Rosc.	International Conference	26-28 October 2022.
4.	Physiological and Molecular Mechanisms of Abiotic Stress Tolerance in Plants, University of Calicut and Indian Society of Plant Physiology (South Zone)	Poster	Athira TR and Jisha KC	Priming strategies for improving waterlogging tolerance in two different turmeric varieties ( <i>Curcuma longa</i> L.)	International Conference	26-28 <sup>th</sup> October 2022
5.	National conference on Interdisciplinary Academic Translational Research and Innovation 2023, MES Asmabi College, P. Vemballur, Thrissur, Kerala	Oral	Athira TR and Jisha KC	Priming enhances tolerance to waterlogging stress in turmeric varieties ( <i>Curcuma longa</i> L.)	National Conference	7 <sup>th</sup> and 8 <sup>th</sup> February 2023
6.	National conference on Interdisciplinary Academic Translational Research and Innovation 2023, MES Asmabi College, P. Vemballur, Thrissur, Kerala.	Oral (won best paper award)	Sumitha Thomas and Jisha KC	Crop Improvement of Ginger ( <i>Zingiber officinale</i> Rosc.) Through Biopriming'	National Conference	7 <sup>th</sup> and 8 <sup>th</sup> February 2023
7.	International seminar on gingers 2023, MBDIPS Kozhikode	Oral	Sumitha Thomas and Jisha KC	'Priming in ginger ( <i>Zingiber officinale</i> Rosc.) for crop improvement and mitigating transient waterlogging'	International seminar	1-3 March 2023
8.	International seminar on "New	Oral	Athira TR and Jisha KC		International Conference	21-23 March

	horizons in Plant Science (NHPS) 2023”, University of Kerala, Thiruvananthapuram					2023
9.	Multidisciplinary international Conference on “Green economy initiatives: perspectives and challenges”, SNM College, Maliankara	Oral	Athira TR and Jisha KC	Priming improves the germination, growth, and yield attributes of turmeric( <i>Curcuma longa</i> L.)	International Conference	28-29 March 2023
10.	ESPLORO’23, Annual Research Conclave and International Conference on Advancement in Research, MES Asmabi College, P. Vemballur in collaboration with Kerala state education council, Thiruvananthapuram	Oral	Athira TR and Jisha KC	Hydropriming: an efficient and eco-friendly method for improving seed germination, growth, and performance of <i>Curcuma longa</i> L.	International Conference	29-30 March 2023
11.	ESPLORO’23, Annual Research Conclave and International Conference on Advancement in Research, MES Asmabi College, P. Vemballur in collaboration with Kerala state education council, Thiruvananthapuram	Oral	Sumitha Thomas and Jisha KC	Waterlogging mitigation of primed ginger plants, special emphasis on Chlorophyll <i>a</i> Fluorescence	International Conference	29-30 March 2023
12.	International seminar on evaluating the prospects of biology, Carmel College (Autonomous)	Oral	Sumitha Thomas and Jisha KC	Bio-priming on ginger rhizome, an eco-friendly crop improvisation.	International	2 <sup>nd</sup> November 2023.

13.	International seminar on “Evaluating the prospects of Biology” organized by the PG & Research Department of Botany, Carmel College (Autonomous) Mala, Thrissur, Kerala.	Oral	Athira TR and Jisha KC	Priming strategies for improving the germination, growth, and yield attributes of Turmeric ( <i>Curcuma longa</i> L.)	International Seminar	2 <sup>nd</sup> November 2023
14.	National seminar on Biodiversity and climate change 2024	Oral	Sumitha Thomas and Jisha KC	Effects of chemical priming on the growth and stress mitigation in ginger ( <i>Zingiber officinale</i> Rosc.)	National Seminar	18-19 January 2024
15.	National seminar on Biodiversity and climate change 2024	Oral	Athira TR and Jisha KC	Effect of hydropriming on germination, growth and performance of <i>Curcuma longa</i> L.	National Seminar	18-19 January 2024