



## NATIONAL CONFERENCE ON EMERGING TRENDS IN PLANT SCIENCE RESEARCH

ETPSR 2025

Sponsored by



Department of Biotechnology  
Ministry of Science & Technology  
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अनुसंधान नेशनल रिसर्च फाउंडेशन  
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Odisha State Higher Education Council  
GOVERNMENT OF ODISHA



SCIENCE & TECHNOLOGY  
DEPARTMENT



### List of Abstracts for Oral and Lightning Poster (Flash Talk) Presentation

THEME 1: APPLIED MICROBIOLOGY			
Name	Title	Presentation	Abstract Code
Dr. Suchismita Pattanaik	Microalgae-mediated nutrient removal from wastewater and biomass valorization	Lightning Poster (Flash Talk)	AM01
Dr. Srinivas Acharya	Monitoring and impact of bioaerosol on urban climate	Oral	AM02
Dr. Sk Riyazat Khadim	Nutrient manipulation with induced over-expression of ACCase and RuBisCO genes for enhanced biomass, and lipid production in <i>Dunaliella salina</i>	Lightning Poster (Flash Talk)	AM03
Dr. Abhishek Mohanta	Effect of light regimes on physiological status, carbon allocation and neutral lipid accumulation in <i>Dunaliella salina</i>	Lightning Poster (Flash Talk)	AM04

Kanika Kisku	<i>Acalypha indica</i> and its phytochemicals inhibit A549 adenocarcinoma cell proliferation via mitochondrial-mediated intrinsic apoptosis pathway and EGFR-NFκB signalling pathway	Lightning Poster (Flash Talk)	AM05
Kumar Avishek	The potential of microalgae in addressing global resource challenges: from bioenergy to nutraceuticals	NA	AM06
Dr. Anirudha Kumar Khillar	Isolation and evaluation of plant growth promoting rhizobacteria from <i>Eichhornia crassipes</i> Mart.	NA	AM07
Dr. Debasish Mohapatra	Variation in growth and survival of <i>Aspergillus niger</i> MRU01 in a preparation for the accelerated degradation of organophosphate.	Oral	AM08
Dr. Manorama Patri	Relationship between gut microbiota and microbial metabolites in disease development: A computational approach	Oral	AM09
Kumar Avishek	Microalgae as a dual-purpose tool: Aquaculture wastewater treatment and sustainable biomass production	Lightning Poster (Flash Talk)	AM10
<b>THEME 2: PLANT BIOCHEMISTRY AND STRESS BIOLOGY</b>			
Dr. Shasmita	Exploring the variations in photosynthetic efficiency during the leaf development in a tropical medicinal tree	Oral	PBSB01
Gautami Dhal	Identification, In-silico and functional analysis of a denitrosylase: Aldo-keto reductase (AKR) in <i>Brassica juncea</i> (L.) Czern.	Lightning Poster (Flash Talk)	PBSB02
Dr. Smrutirekha Mishra	Improved tolerance of the enriched <i>Synechocystis</i> sp. PCC 6803 to imidacloprid	Oral	PBSB03
Dr. Barsha Bhushan Swain	Degradation efficiency of enriched <i>Anabaena</i> sp. PCC 7119 for removal of chlorpyrifos residue in soil	Oral	PBSB04
Swagat Kumar Barik	Identification and impact of low dose cadmium in enhancing growth & development in rice ( <i>Oryza sativa</i> L.)	Lightning Poster (Flash Talk)	PBSB05
Saswat Swarup Padhi	Melatonin induced physiological and biochemical adaptations enhancing drought tolerance in rice ( <i>Oryza sativa</i> L.)	Lightning Poster (Flash Talk)	PBSB06

Laxmipriya Behera	Fungal endophytes enhance photosynthesis, antioxidant defence, and carbohydrate modulation in rice under drought stress	Lightning Poster (Flash Talk)	PBSB07
Snehasree Samanta	Identification of phosphorous efficient rice varieties based on shoot and root architectural response through hydroponics screening	Lightning Poster (Flash Talk)	PBSB08
Bandana Mohapatra	Enhancing drought resilience and starch accumulation in rice through melatonin seed priming and foliar application	Lightning Poster (Flash Talk)	PBSB09
Gyanajeet Parida	Time-course quantification of carbonylated proteins in <i>Glycine max</i> seeds via optimized extraction methods	Lightning Poster (Flash Talk)	PBSB10
Payal Swain	CD36-targeted interventions with biomolecule resveratrol: an <i>in-silico</i> approach to drug discovery	Lightning Poster (Flash Talk)	PBSB11
Soumyashree Purohit	Characterization of cuticular wax in contrasting rice genotypes reveals preformed resistance mechanisms against bacterial blight	Lightning Poster (Flash Talk)	PBSB12
Dr. Nihar Ranjan Singh	Exploring the nutraceutical value of <i>Bauhinia variegata</i> L. flowers: antioxidant and antiglycation properties	Oral	PBSB13
<b>THEME 3: PLANT BIOTECHNOLOGY</b>			
Poojitha Jain	Tissue-specific expression of guanosine deaminase ( <i>gsda</i> ) in coffee ( <i>Coffea canephora</i> ): Implications for caffeine biosynthesis and purine salvage	Lightning Poster (Flash Talk)	PB01
Barnali Mohapatra	Chemical composition and phytochemical screening of micropropagated <i>Alpinia galanga</i> from Eastern India	Lightning Poster (Flash Talk)	PB02
Swayamsiddha Aswita Dhal	Introgression of seed dormancy in popular rice variety CR Dhan 307 from <i>Oryza rufipogon</i>	Lightning Poster (Flash Talk)	PB03
Aryaputri Bedaprabha	Transformation confirmation and standardisation of different parameters for hairy root culture using <i>in vitro</i> explants of <i>Lawsonia inermis</i> L.	Lightning Poster (Flash Talk)	PB04
Debasmita Panda	CRISPR-Cas9-mediated <i>OsSDI</i> knockout confers semi-dwarfism in aromatic rice landrace Nua-Kalajeera	Lightning Poster (Flash Talk)	PB05

Suchitrarani Sahoo	Optimized plant growth regulators for efficient <i>in Vitro</i> regeneration of Strawberry plants ( <i>Fragaria</i> × <i>ananassa</i> )	Lightning Poster (Flash Talk)	PB06
Dr. Ankita Prusty	Role of mediator complex subunit OsMED14_2 in regulating rice development	Oral	PB07
Swetapadma Sahu	Enhancement of salt tolerance in rice ( <i>Oryza sativa</i> L.) through gene editing of <i>qSOR1</i> using CRISPR-Cas9 approach	Lightning Poster (Flash Talk)	PB08
Dr. Johnnita Tirkey	Development of molecular markers for <i>Dendrobium</i> Sonia: A high commercial ornamental orchid	Oral	PB09
Krishna Rani	Identification of bacterial blight resistance in rice using molecular markers	Lightning Poster (Flash Talk)	PB10
Srushti Prajna Mohanty	<i>In vitro</i> regeneration from node of <i>Uvaria hamiltonii</i> Hook. f. & Thoms. and assessment of genetic and biochemical fidelity of micropropagated plants	Lightning Poster (Flash Talk)	PB11
Chinmayee Mohanty	Engineering the TnpB toolbox to improve its efficiency in plant genome editing	Lightning Poster (Flash Talk)	PB12
Dr. Durga Prasad Barik	Hairy root culture in different medicinal plants of Odisha	Oral	PB13
Ganesh Kejriwal	Towards nutrient-dense rice ( <i>Oryza sativa</i> L.): Progress, challenges, and future directions in biofortification research	Lightning Poster (Flash Talk)	PB14
Anindita Mishra	Agro-morphological diversity and clustering of B × R-derived doubled haploid rice lines	Lightning Poster (Flash Talk)	PB15
Swetaleena Mishra	Overexpressing of RNA helicase confers abiotic stress tolerance with improved yield in rice	Lightning Poster (Flash Talk)	PB16
Priyanka Pani	Green synthesis of <i>P. guajava</i> silver nanoparticles as sustainable therapeutic strategy against oral biofilm associated dental caries	Lightning Poster (Flash Talk)	PB17
Sasmita Patra	Green synthesis of gold nanoparticles from <i>Acacia auriculiformis</i> : A promising therapeutic strategy against multidrug- resistant urinary tract infections	Lightning Poster (Flash Talk)	PB18

Dr. Sanjay Kumar Madkani	<i>In vitro</i> studies in <i>Mucuna</i> species: <i>Mucuna gigantea</i> and <i>Mucuna pruriens</i> var. <i>Utilis</i> using cotyledonary node	Oral	PB19
Madhusmita Samal	<i>In vitro</i> plant propagation, genetic and biochemical analysis of micropropagated plants of <i>Stemona tuberosa</i> Lour.: a treasure trove of ethnomedicine	Lightning Poster (Flash Talk)	PB20
Harshal Patil	Assessing efficacy of ITS2 minibarcode for identification of grasses	Lightning Poster (Flash Talk)	PB21
Raj Kishore Sahoo	Wandering through <i>Oryza</i> : Deciphering the WUSCHEL-related homeobox gene family evolutionary journey	Lightning Poster (Flash Talk)	PB22
Raju Mallick	Genome-wide analysis of MYC transcription factors in foxtail millet ( <i>Setaria italica</i> ) highlights roles in abiotic stresses	Lightning Poster (Flash Talk)	PB23
Amar Kumar Muska	Two-component system genes in foxtail millet ( <i>Setaria italica</i> ): Genome-wide identification and characterization of genes regulating in abiotic stresses	Lightning Poster (Flash Talk)	PB24
Sasmita Pati	Transfer of drought and submergence tolerance traits into the popular rice variety, Maudamani through marker-assisted breeding	Lightning Poster (Flash Talk)	PB25
Dr. Khirod Kumar Sahoo	Climate resilient rice plant production is need of the hour	Oral	PB26
<b>THEME 4: ECOLOGY, ENVIRONMENT AND CONSERVATION BIOLOGY</b>			
Amandeep Singh	Assessment of physico-chemical properties of soil collected from various agricultural fields of Malwa region of Punjab	Lightning Poster (Flash Talk)	EECB01
Itishree Behera	Detoxification of industrial pollutants from Paradeep industrial belt of Odisha through halophilic microorganisms	Lightning Poster (Flash Talk)	EECB02
Dr. Pradeep K. Kamila	Habitat distribution modelling and reinforcement of <i>Cycas sphaerica</i> Roxb. - An endemic cycad species of India for improvement of its conservation status	Oral	EECB03
Ayunsa Das	Assessment of physicochemistry and algal diversity in Kathajodi and Mahanadi rivers of Cuttack	Lightning Poster (Flash Talk)	EECB04

Dr. Somani Jethi	Hydroseeding: The futuristic revolution	Oral	EECB05
Dr. Smaranika Das	Blue carbon ecosystems and disaster resilience: Insights from Odisha, India	Oral	EECB06
Sophia Subhadarsini Pradhan	From soil to solution: Addressing antibiotic contamination in agroecosystems	NA	EECB07
Dr. Kumari Monalisa	Development of an efficient <i>in vitro</i> propagation protocol, assessment of genetic fidelity and phytochemical analysis of <i>Blepharispermum subsessile</i> DC.: a threatened medicinal plant of India	Lightning Poster (Flash Talk)	EECB08
Suchismita Sahoo	Micropropagation of pharmaceutically important plant <i>Curcuma caesia</i> Roxb. using liquid medium and assessment of phytoconstituents of their regenerants	Lightning Poster (Flash Talk)	EECB09
Swagati Priyadarsini	<i>Brassica</i> spp. as green tools for heavy metal phytoremediation: A sustainable approach to soil restoration	Lightning Poster (Flash Talk)	EECB10
Dr. Anuradha Pradhan	Quantitative ethnobotanical studies of useful plant species of Baisipalli wildlife sanctuary, Odisha	NA	EECB11
Dr. Shashikanta Behera	Biotechnological advances of <i>Hedychium coronarium</i> J. Koenig: a threatened medicinal plant of India	Oral	EECB12
Dr. Biswajit Mohapatra	Sanative use of ethnomedicinal plants as aphrodisiac agent in North Central region of Odisha	NA	EECB13
Pragnya Mishra	Development of an efficient <i>in vitro</i> propagation protocol and evaluation of phytochemical composition and pharmaceutical properties of <i>Hypericum gaitii</i> Haines: a conservation concerned endemic plant of India	Lightning Poster (Flash Talk)	EECB14
Atharva Hedao	DNA barcoding of bugs	Lightning Poster (Flash Talk)	EECB15
Dr. Harekrushna Swain	Herbaria: Background, importance, preparation methods, and management concerns	Oral	EECB16

THEME 5: FOOD AND FODDER CROP RESEARCH			
Priya Koley	Phytoconstituents and nutritional composition of the foliage of <i>Hibiscus acetosella</i> Wela. Ex Hiern	Lightning Poster (Flash Talk)	FFCR01
Dr. Kshan Prabha Sahoo	Diversity and ethnomedicinal importance of leafy green vegetables in Jajpur district, Odisha	NA	FFCR02
Dr. Jyotirmayee Dash	Effect of farming practices on soil algal communities in the agroecosystem of Nimapara and surrounding areas, and their role in rice yield	NA	FFCR03
Dayanidhi Sahoo	Optimizing hydroponic nutrient dynamics in precision farming: A scientific gateway to enhance yield of economically important plant products	Lightning Poster (Flash Talk)	FFCR04
Sabnam Ara	Improved micropropagation protocol of anthocyanin rich sweet potato var. Bhu Krishna and assessment of genetic fidelity, phytochemicals & anticancer activities of the regenerants	Lightning Poster (Flash Talk)	FFCR05
THEME 6: ETHNOBOTANY-BIOTECHNOLOGY INTERFACE			
Abhyudaya J	Nutritional and bioactive potential of <i>Santalum album</i> foliage: Adding value to community cultivation of sandalwood tree	Lightning Poster (Flash Talk)	EBI01
Haripriya Pakala	The foliage of <i>Corchorus aestuans</i> L. - A potential source of phytochemicals and nutrients.	Lightning Poster (Flash Talk)	EBI02
Dr. Arpita Moharana	Production of non-embryogenic synthetic seed and validation of their phytochemical fidelity of <i>Lawsonia inermis</i> L.: A traditional medicinal plant	Oral	EBI03
Devi Prasanna Dash	Phytochemical analysis and biological activities of <i>Polyalthia simiarum</i> (Buch. - Ham. Ex Hook. f. & Thomson) Benth. Ex. Hook. f. & Thomson: A vulnerable medicinal plant	Lightning Poster (Flash Talk)	EBI04
Saraswati Majhi	Ethnobotanical study of medicinal plants in Rairangpur: uses and significance	Lightning Poster (Flash Talk)	EBI05

Sandeep Kumar Mohanta	Phytochemical screening and antibacterial activity analysis of leaf extracts of <i>Lasiococca comberi</i> Haines	Lightning Poster (Flash Talk)	EBI06
Subhasmita Behera	Herbal therapeutic plants used by indigenous people of the Mankadakenda Region in Mayurbhanj district, Odisha	Lightning Poster (Flash Talk)	EBI07
Padmini Parida	Phytochemical and anti-microbial analysis of <i>Cryptocarya amygdalina</i> Nees leaves	Lightning Poster (Flash Talk)	EBI08
Jhilli Pradhan	Phytochemicals analysis and biological activities of <i>Clerodendrum infortunatum</i> L.: An important medicinal plant for skin treatment	Lightning Poster (Flash Talk)	EBI09
Sweta Mishra	Quantification of bioactive compounds and evaluation of antibacterial activity of <i>Scurrula parasitica</i> (Loranthaceae)	NA	EBI10
Dr. Bibhuti Bhusan Champati	Identification of adulterant species of <i>Cinnamomum tamala</i> from the region of North Eastern India using optimized HPLC Fingerprint	Oral	EBI11
Dr. Samarendra Narayan Mallick	Diversity, ethnobotany and sustainable use of plants for asthma by the Bhuyan tribes of Sundargarh district, Odisha, India.	Oral	EBI12
Dr. Umesh Chandra Naik	Synthesis of biofunctionalized cuprous oxide nanoparticles using root extract of <i>Withania somnifera</i> and its antibacterial efficacy	Oral	EBI13
Subhashree Priyadarsini	Micropropagation, assessment of genetic stability, phytochemical analysis and pharmacological activities of <i>Uraria picta</i> , an ethnobotanically important plant	Lightning Poster (Flash Talk)	EBI14
Siba Prasad Pidika	Phytochemical analysis using thin layer chromatography of <i>Sphaeranthus indicus</i> L. leaves extract	Lightning Poster (Flash Talk)	EBI15
Dr. Srikanta Jena	Curcumin reduces oxidative stress without altering the expressions of antioxidant enzymes in testis of hypothyroid rat	Oral	EBI16



**NB:**

**Oral Presentation:** Eight (8) minutes for presentation + Two (2) minutes for discussion

**Poster Presentation Style:**

As we aim to ensure that the conference runs smoothly and that all participants have an equal opportunity to share their research, we would like to inform you of a slight change in the Poster presentation format. To maintain the pace of the conference and allow time for all participants, we kindly request that your Poster Presentation will be as a **Flash Talk / Lightning Poster** Presentation.

These presentations will be in a poster format only. A single slide in the poster format, like a digital poster, will be projected during the **Flash Talk / Lightning Poster Presentation**. Each presenter will have a maximum of 3 minutes to present their research and an additional 2 minutes for questions and discussions.

**NOTE:** Poster sessions will be competitive ones. Theme wise prizes will be awarded. Exceeding the 3-minutes time limit will result in a deduction of marks. If you have any questions or concerns regarding this format or need assistance adapting your presentation, please do not hesitate to contact the conference organizing committee via email only. Thank you for your understanding and cooperation. We look forward to your engaging poster-style presentations at the ETPSR 2025.