

National Virtual Conference on
**‘Current Trends and Challenges in Plant Biochemistry
and Biotechnology’**

20-21 November 2020

Organised by

**Society for Plant Biochemistry and
Biotechnology (SPBB), New Delhi**

**Birla Institute of Technology and Science
Pilani, K. K. Birla Goa Campus**

PROGRAMME

Registration: 08:45AM to 09:15 AM

20th November 2020 (Friday)		
Inaugural Session: 09:30 AM – 11:05 AM		
09:15am–09:30am	Joining for the Conference (through virtual platform)	
09:30am–09:40am	Welcome Address	Prof. G. Raghurama Director, BITS Pilani, K. K. Birla Goa Campus
09:40am–09:50am	Presidential Address	Dr. S. L. Mehta President SPBB, New Delhi
09:50am–10:00am	SPBB-Springer awards/honours	
10:00am–11:00am	Plenary Session: Chairperson: Prof. Samit Chattopadhyay, Sr. Professor, BITS Pilani, Goa Campus Convenor: Dr. Malabika Biswas Topic: ‘Himalayan Plants and their Nutraceutical Potential’ Speaker: Dr. Sanjay Kumar Director, CSIR-IHBT, Palampur	
11:00am–11:05am	Vote of Thanks	Dr. Rajesh Mehrotra BITS Pilani, K. K. Birla Goa Campus
11:05am–11:15am	Break	

Technical Session 1 (11:15am-01:35pm)**Theme: Plant Metabolites and Nutraceuticals****Chairperson: Prof. S. R. Bhat****Convenor: Dr. Vinutha T; Rapporteur: Prof. Utpal Roy**

11:15am-11:45am	Keynote talk: Metabolic Engineering of Oilseed Crops for Enhanced Oil Production and Increasing Tolerance to Abiotic Stresses	Prof. Om Prakash Dhankher (UMASS Amherst, USA)
11:45am-12:05pm	Lead talk: Biotechnological Approaches for Nutritional Improvement in Banana Fruit	Dr. Siddharth Tiwari (NABI, Mohali)
12:05pm-12:25pm	Lead talk: Understanding Plant Triterpene Biosynthesis: Key Enzymes and Pathway Reconstruction	Dr. Sumit Ghosh (CIMAP, Lucknow)
12:25pm-12:45pm	Lead talk: Conservation and <i>in vitro</i> Immunomodulatory Potential of <i>Gymnema sylvestre</i>	Prof. Padmanabh Dwivedi (BHU, Varanasi)
12:45pm-12:55pm	Oral talk: 'Nutraceutical starch' - An interplay of Food Matrix Components	Dr. Veda Krishnan
12:55pm-01:05pm	Oral talk: Untapped Nutraceutical Potential of <i>Cocos nucifera</i> L.- the Kalpavriksha on Earth	Dr. S.V. Ramesh
01:05pm-01:15pm	Oral talk: Phytochemical Analysis of Rhizome of <i>Zingiber officinale</i> in Different Solvents	Dr. Renu Mishra
01:15pm-01:25pm	Oral talk: Nutraceutical Characterisation of Anthocyanin-Rich Flower Bracts of Banana cv. Grand Naine (<i>Musa</i> spp., AAA)	Dr. M. Mayil Vaganan
01:25pm-01:35pm	Oral talk: Beta Amylase as a Selection Criteria for Improving Diastatic Power in Malt Barley	Dr. Dinesh Kumar
01:35pm-2:00pm	Break	

Technical Session 2 (2:00pm-3:50pm)**Theme: Plant Stress Management****Chairperson: Dr. Rakesh Tuli****Convenor: Dr. S. K. Mangrauthia; Rapporteur: Dr. Tushar T. Saha**

2:00pm-2:30pm	Keynote talk: Battle Against the Viruses: smallRNAs as Defender	Dr. Manoj Prasad (NIPGR, New Delhi)
2:30pm-2:50pm	Lead talk: Induced Plant Mutations in the Genomics Era	Dr. P. Suprasanna (BARC, Mumbai)
2:50pm-3:10pm	Lead talk: Bio-prospection of Plant Diversity for Novel Insecticidal Proteins/genes for Next Generation Insect Tolerant GM Crops	Dr. P. K. Singh (NBRI, Lucknow)
3:10pm-3:30pm	Lead talk: Regulating the ABA-dependent and -independent Signalling for Enhancing Abiotic Stress Tolerance in Plants	Dr. Pradeep K. Agarwal (CSMCRI, Bhavnagar)
3:30pm-3:40pm	Oral talk: Unfolding the Story of RuBisCo Activase in Wheat under Terminal Heat Through Omics Approaches	Dr. R. R. Kumar

3:40pm-3:50pm	Oral talk: Conditional Pathogenesis: Understanding Why Potentially Beneficial Rhizobacteria turn Pathogenic under certain Environmental Conditions	Dr. Sridev Mohapatra
3:50pm-4:00pm	Break	
Technical Session 3 (4:00pm-6:00pm)		
Theme: Plant Biochemistry and Crop Improvement		
Chairperson: Dr. S. L. Mehta		
Convenor: Dr. Sridev Mohapatra ; Rapporteur: Dr. Sukanta Mondal		
4:00pm-4:30pm	Keynote talk: A Crosstalk between ABA Signalling, miRNA Biogenesis factor and Mitogen Activated Protein Kinase	Dr. Alok K. Sinha (NIPGR, New Delhi)
4:30pm-4:50pm	Lead talk: A story of Mitochondrial Gate-keeper: What we know about VDAC and its Function in Plants?	Prof. Girdhar K. Pandey (University of Delhi, New Delhi)
4:50pm-5:10pm	Lead talk: dsRNA to Determine the Role of MYB Family Genes in Orchid Flower Shape and Colour	Prof. Jennifer Ann Harikrishna (University of Malaya, Malaysia)
5:10pm-5:30pm	Lead talk: Structure and Function of Plant Mediator Complex	Dr. Jitendra Thakur (NIPGR, New Delhi)
5:30pm-5:40pm	Oral talk: A Novel Processing Technique to Reduce Rancidity in Stored Pearl Millet Flour: It's effect on Nutritional Quality and Functionality	Dr. Vinutha Thimmegowda
5:40pm-5:50pm	Oral talk: Plant Signalling- a mode of Communication in Plants	Dr. Siddhi Jalmi
5:50pm-6:00pm	Oral talk: Glutathione S transferase: A versatile protein family	Prof. Mahesh Basantani
6:00pm-6:30pm	SPBB Annual General Body Meeting	

21st November 2020 (Saturday)

Dr. N. B. Das Memorial Lecture Session (09:45AM-12:05PM)

09:45am-10:00am	Joining for the Conference (through virtual platform)	
10.00am-10.05am	Opening of the session: Lightening of lamp and floral tribute to late Dr. N.B. Das	
10:05am-10:15am	Welcome Address	Prof. G. Raghurama Director, BITS Pilani, K K Birla Goa Campus
10:15am-10:25am	Opening Remarks	Dr. A. K. Singh Director, ICAR-IARI, New Delhi
10:25am- 10:35am	Current and Prospective Plans of the Society for Plant Biochemistry and Biotechnology (SPBB)	Dr. Shelly Praveen Secretary, SPBB
10:35am-10:50am	Address by the President	Dr. S. L. Mehta President, SPBB
10:50am- 10:55am	Brief account of Dr. N.B. Das Memorial lecture. Introduction of the Chair	
10:55am-11:40am	Dr. N.B. Das Memorial Lecture	Dr. T. Mohapatra Secretary (DARE) & Director General (ICAR)
11:40am-11:50am	Address by the Chair	Dr. Chandrima Shaha President, INSA
11:50am-12:00pm	Felicitation	
12.00pm-12.05pm	Vote of Thanks	Dr. Kundan Kumar BITS, Pilani, Goa
12:05pm-01:00pm	e-Poster Session	
01:00pm-02:00pm	Break	

Concurrent Technical Session 4

Theme: Genome Editing, Translational Genomics and Plant Breeding			Theme: Conservation of Genetic Resources		
2:00pm-4:00pm	Chairperson: Dr. P. K. Gupta Convenor: Dr. Sandhya Mehrotra Rapporteur: Dr. Gireesha Mohannath		02:00pm-03:30pm	Chairperson: Prof. S. Krishnan Convenor: Dr. Sumit Biswas Rapporteur: Dr. Manohara K. K.	
2:00pm-2:30pm	Keynote talk: Epigenetic Control of Resistance Against Leaf Rust in Common Wheat	Prof. P. K. Gupta (Ch. Charan Singh University, Meerut)	02:00pm-02:30pm	Keynote talk: Role of Educational Institutes in Documentation, Bio-prospecting, Sustainable use and Conservation of Plant diversity of Western Ghats	Prof. S.R. Yadav (Shivaji University, Kolhapur)
2:30pm-2:50pm	Lead talk: Genetic Engineering and Genome Editing for Abiotic Stress Tolerance in Rice	Dr. C. Viswanathan (ICAR-IARI)	2:30pm-2:50pm	Lead talk: An Integrated Approach to the Conservation of Plants	Prof. M. K. Janarthanam (Goa University, Goa)
2:50pm-3:10pm	Lead talk: Integrating Precision Phenotyping and Genomics in Wheat Improvement amidst Widening Challenges	Dr. A. K. Joshi (CIMMYT-India, New Delhi)	2:50pm-3:10pm	Lead talk: Vegetable Amaranths of Goa for Food Colorant and Nematode Pest Management	Dr. V. Arunachalam (ICAR-CCARI, Goa)
3:10pm-3:30pm	Lead talk: A Novel Male Sterility-Fertility Restoration System for the Hybrid Seed Production in Cotton	Dr. Samir Sawant (NBRI, Lucknow)	3:10pm-3:20pm	Oral talk: Utilization of Potential Salt Tolerant Landrace 'Korgut' from Goa Coast for Genetic Improvement in Rice	Dr. Manohara K. K.
3:30pm-3:40pm	Oral talk: RNAi Mediated Resistance Development against Rice Diseases: Exploiting Pathogen Genes and Host Non-coding RNAs	Dr. S. K. Mangrauthia	3:20pm-3:30pm	Oral talk: Generation of New Variability for Yield and Novel Traits in Finger Millet through Induced Gamma Mutagenesis	Dr. Ganpathy K. N.
3:40pm-3:50pm	Oral talk: Epigenomic Manipulation of Crop Plants for Trait Improvement	Dr. Gireesha Mohannath			
3:50pm-4:00pm	Oral talk: Genome-Wide and Candidate Gene Association Studies for Flowering Time Trait in Linseed (<i>Linum usitatissimum</i>)	Dr. Dhammaprakash Wankhede			

Concurrent Technical Session 5

Presentation under Young Scientist Session

Theme: Plant Metabolites and Nutraceuticals and Plant Stress Management			Theme: Plant Biochemistry and Crop Improvement, Genome Editing, Translational Genomics and Plant breeding and Conservation of Genetic Resources, IPR and Biosafety issue		
04:00pm-06:00pm	Chairperson: Dr. K. C. Bansal Convenor: Dr. R. R. Kumar Rapporteur: Dr. Siddhi Jalmi		04:00pm-06:00pm	Chairperson: Dr. Archana Sachdev Convenor: Dr. Kundan Kumar Rapporteur: Dr. Malbika Biswas	
4:00pm-4:07pm	Biochemical Analysis and Mass Profiling of Traditional Medicinal Plants	Dr. D. R Gangapur	4:00pm-4:07pm	Exploring natural variation for investigating thiourea-mediated enhanced growth and stress tolerance in soybean	Dr. Rakesh Manuka
4:07pm-4:14pm	Allelopathic Effects and Characterization of Some Medicinal Plant Extracts in <i>Vigna radiata</i> L. Wilczek and their Efficacy in the Control of Charcoal Rot Disease	Dr. Priyanka Gupta	4:07pm-4:14pm	5N-influx and homeolog expression of nitrate transporter genes under nitrate-limited conditions in contrasting bread wheat genotypes	Amresh Kumar
4:14pm-4:21pm	Evaluation of dehydrated <i>Celosia argentea</i> leaves as a potent source of Quercetin-A dietary antioxidant	Dr. D. Amirtham	4:14pm-4:21pm	Identification, cloning and homeolog expression bias in AtNRT1.5 orthologs under different external nitrate concentrations in bread wheat (<i>Triticum aestivum</i> L)	Muhammed Shamnas V
4:21pm-4:28pm	Enhancing the functionality and nutraceutical potential of soymilk through fermentation by probiotic Lactic Acid Bacteria (LAB)	Minnu Sasi	4:21pm-4:28pm	In planta transformation technique for crop improvement	Samrity Sharma
4:28pm-4:35pm	Determination of Polyphenols, in vitro Antimicrobial and Antioxidant Activity of Selected Mangrove Species	N. L. Dahibhate	4:28pm-4:35pm	Production and characterization of antifungal metabolites from tomato rhizobacteria for a <i>Fusarium</i> wilt-free tomato cultivations	Vijay Karuppiah
4:35pm-4:42pm	Biochemical and histochemical characterization of floral cuticular wax in tuberose	Raktim Bhattacharya	4:35pm-4:42pm	Understanding the genetic basis of rice leaf development and growth	Vikram Jathar
4:42pm-4:49pm	Artificial miRNA mediated resistance in tobacco against geminivirus infecting <i>Jatropha</i> by maintaining photosynthesis and metabolic pathways	Dr. Prashant More	4:42pm-4:49pm	<i>In-vitro</i> biotechnological strategies to improve Niger (<i>Guizotia abyssinica</i> L.F. Cass) for enhancing edible oil production in India	Dr. Shrinkhla Maurya
4:49pm-4:56pm	Protective Role of Spermidine in Salt	Dr. Riti T. Kapoor	4:49pm-4:56pm	Chromatin Assembly Factor-1 (CAF-1) plays a	Aveepsha Bera

	Stress Tolerance Mechanism of tomato plant			role in ribosomal RNA gene regulation and in maintaining genomic stability in <i>Arabidopsis thaliana</i>	
4:56pm-5:03pm	Overexpression of JcWRKY2 enhances salinity and <i>Macrophomina phaseolina</i> tolerance in transgenic tobacco	Dr. Mitali Dabi	4:56pm-5:03pm	Insights into population structure and genetic divergence revealed genetic differentiation among different adaptable and diverse colored sub-populations of Indian carrot (<i>Daucus carota</i> L.) accessions	Chaitra Kulkarni
5:03pm-5:10pm	Metagenomic analysis of microbial diversity in control and high arsenic field of West Bengal (Nadia district) under the thiourea supplementation	Anurakti Shukla	5:03pm-5:10pm	Different mutant alleles of Histone Deacetylase 6 (hda6) have different effects on rRNA genome instability in <i>Arabidopsis thaliana</i>	Gargi Prasad S
5:10pm-5:17pm	Exploring endophytes isolated from medicinal plants against <i>Colletotrichum gloeosporioides</i> (Penz.) Sacc. causing anthracnose in greater yam (<i>Dioscorea alata</i> L.)	P. R. Amrutha	5:10pm-5:17pm	A Unary-Offset Integrated OctaFilial Generations Homozygosity values Computational Model, in addition to accommodating "DUS" ThreeBIT Switchkey Schema of EIGHT Staple Indian Millet varieties, based upon Binary/ 2state Elementary Cellular Automata	Praharshit Sharma
5:17pm-5:24pm	Salicylic acid enhances the growth of rice (<i>Oryza sativa</i> L.) plants under drought stress conditions	Korgoankar Shravani	5:17pm-5:24pm	Exploring the genetic resources for functional genomics and marker-assisted breeding of carrot (<i>Daucus carota</i> L.)	Sarvamangala S Cholin
5:24pm-5:31pm	Identification and characterization of MAPKKs from <i>Cicer arietinum</i> and their involvement in plant defense against <i>Helicoverpa armigera</i>	Radhika Keshan	5:24pm-5:31pm	A Study of AGPase Genes for Thermotolerance in Wheat using Comparative Genomics and Bioinformatics	Dr. Ritu Batra
5:31pm-5:38pm	Green Nanofungicide and their application in biotic stress management	Ranjani S.	5:31pm-5:38pm	Bioprospecting native wild nutmegs from Andaman and Nicobar Islands, India for their sustainable utilization	Dr. Ajit Arun Waman
5:38pm-5:45pm	Cloning, in silico characterization and expression analysis of TIP Members of Rice (<i>Oryza sativa</i> L.)	Suhas Karle	5:38pm-5:45pm	<i>Garcinia andamanica</i> King: an endemic horticultural genetic resource from Andaman Islands	Dr. Pooja Bohra
5:45pm-5:52pm	Co-expression Network Analysis of Protein Phosphatase 2A (PP2A) Genes with Stress-Responsive Genes in	Zaiba Hasan Khan	5:45pm-5:52pm	Study of novel molecular based studies for Indian medicinal plants to create genomic database	Lolla J. Lakshman

	<i>Arabidopsis thaliana</i> Reveals 13 Key Regulators				
			5:52pm- 6:00pm	A critical analysis of regulatory framework for biotechnology in India	Rishi Singh Solanki
6:00pm-6:10pm		Award announcement and Closing remark			