

TECHNICAL PROGRAMME

International Conference

on

**Biotechnological Initiatives for Climate Resilient
Agriculture-2022
(BICRA-2022)**

(In hybrid mode)

(January: 07-09, 2022)

Organized by



DEPARTMENT OF AGRICULTURAL BIOTECHNOLOGY & MOLECULAR BIOLOGY
DR. RAJENDRA PRASAD CENTRAL AGRICULTURAL UNIVERSITY
PUSA, SAMASTIPUR-848 1 25, BIHAR, INDIA



National Higher Education Project (ICAR), New Delhi

(Events Schedule)

1st Day (Jan 7, 2022)

| Venue: Vidyapati Sabhaghar | |
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| Registration | Jan 7, 2022 Time: 9:00-10:30 hrs and 14:00-16:30 hrs Jan 8, 2022 Time: 10:00-11:00 hrs |
| 11.00-12.00 | Inaugural Session |
| Rapporteurs | Dr. Nidhi and Dr. Sarita Kumari |
| Session Coordinator | Dr. S. K. Patel |
| 11.45-12.00 | Hi-Tea |

| Plenary Session I | |
|----------------------------|--|
| 12.00-13.30 | |
| Chair | Dr. R. C. Srivastava, Vice Chancellor, RPCAU, Pusa |
| Co-Chair | Dr. Mithilesh Kumar, Director Research, RPCAU, Pusa |
| Rapporteurs | Dr. Rajeev Nayan Bahuguna and Dr. Jyotsana Rani Pradhan |
| Session Coordinator | Dr. S. K. Patel and Dr. Kumari Anjani |
| 12.00-12.20 | Molecular breeding for development of climate resilient rice varieties <i>Dr. A. K. Singh, Director, ICAR-IARI, New Delhi</i> |
| 12.20-12.40 | Crop improvement strategies for building food, nutritional security and climate resilience in dryland tropics of Asia and sub-Saharan Africa <i>Dr. Arvind Kumar, ICRISAT, Hyderabad</i> |
| 12.40-13.00 | Vavilvoivan principles to breeding for crop rotations <i>Eric Bishop-von Wettberg, University of Vermont</i> |
| 13.00-13.20 | Plant hormones: targets for another green revolution? <i>Dr. Priti Krishna, Western Sydney University, NSW, Australia</i> |
| 13.20-13.30 | Discussion/Remarks (Chair) |
| 13.20-14.30 | Lunch Break |

| Plenary Session II | |
|----------------------------|--|
| 14.30-15.15 | |
| Chair | Dr. Mithilesh Kumar, Director Research, RPCAU, Pusa |
| Co-Chair | Dr. V. K. Sharma, HoD, AB&MB, RPCAU, Pusa |
| Rapporteurs | Dr. Gita Kumari and Dr. Aman Jaiswal |
| Session Coordinator | Dr. Nidhi and Dr. Meenakshi Dwivedi |
| 14.30-14.50 | Mutation Breeding in the Era of Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) <i>Dr. Sanjay J. Jambhulkar, BARC, Mumbai</i> |
| 14.50-15.10 | Mediator complex is a converging point for multigenic trait <i>Dr. Jitendra K. Thakur, ICGEB, New Delhi</i> |
| 15.10-15.30 | Developing genomic resources for climate resilient crops <i>Dr. Damaris Odeny, ICRISAT, Kenya</i> |
| 15.30-15.45 | Discussion/Remarks (Chair) |
| 15.45-16.00 | Tea break |

| Poster presentations (Online) | |
|--------------------------------------|--|
| Venue: Vidyapati Sabhaghar | |
| Judges | Dr. Mithilesh Kumar, DR, RPCAU, Pusa Dr. V. K. Sharma, AB&MB, RPCAU, Pusa Dr. Neeraj Kumar, Entomology, RPCAU, Pusa Dr. Satish Kumar Singh, PBG, RPCAU, Pusa Dr. Bishun Deo Prasad, AB&MB, RPCAU, Pusa Dr. Mahendar Thudi, AB&MB, RPCAU, Pusa |
| Rapporteurs | Dr. Mahesh Kumar and Dr. G. S. Giri |
| Session Coordinator | Dr. Kumari Anjani and Dr. M. S. Sai Reddy |
| 17.30-17.45 | Discussion /Remarks by Judges |
| 17.45-18.00 | Tea Break |

1st Day (Jan 7, 2022)

Concurrent session

| | |
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| 14.30-16.30 | Theme IX : Animal Biotechnology & Immunology |
| | Venue: Conference Hall, Centre of Excellence on Water Management |
| Chair | Dr. Ajit K Saxena, AIIMS, Patna and Dr. A. Kundu, PD, RGM |
| Co-Chair | Dr. Shivendra Kumar, CoF, RPCAU, Pusa |
| Rapporteurs | Dr. Rajeev Kr. Asthana and Dr. Ravi Kant |
| Session Co-ordinator | Dr. Sumeet Kumar Singh and Dr. Ravish Chandra |
| | Lead lectures |
| 14.30-14.45 | Environmental Factors influence Human Health- Challenge to the Scientist for the People <i>Dr. Ajit K Saxena, AIIMS, Patna</i> |
| | Oral presentations |
| | Genetic basis and therapeutic interventions of skin cancer <i>Suhail Muzaffar, University of Alabama, USA</i> |
| | Level of Unusual Uses Flexibility (UX) among young adolescents based on their gender <i>Somit Sheoran, Chaudhary Charan Singh Haryana Agricultural University Hisar, India</i> |
| | Faecal sample collection and preservation for hormone assessment to monitor the health of captive Rhinoceros <i>Bibha Choubey, Patna University</i> |
| | Study on Technological aspects for Process Standardization in Shelf Life Enhancement of Paneer from Milk of Bihar origin <i>Jahangir Badshah, Sanjay Gandhi Institute of Dairy Technology, Patna</i> |
| | Detection and Characterization of <i>Paramphistome</i> spp. Antigen in Domestic Ruminants Using Immunodiagnostic Assays <i>Syed Shabih Hassan, College of Fisheries, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana, Punjab</i> |
| | Genetic diversity analysis reveals selection signatures for climate resilience in Gir and Tharparkar cattle <i>Nidhi Sukhija, ICAR-National Dairy Research Institute, Karnal, India</i> |
| | LDH isozymes and it's presence in semen <i>Satya Shubhangi, Tilka Manjhi Bhagalpur University, Bhagalpur</i> |
| | Exploring the in vitro supplemental effects of IFNγ, progesterone and LPS on bovine neutrophils to understand neutrophilic response towards pregnancy vs pathological signals <i>Akanksha Gupta, ICAR-National Dairy Research Institute, Karnal, Haryana</i> |
| | Feed block: Milk production and Milk composition <i>Amit Kumar, BAU, Sabour</i> |
| 16.45-17.00 | Discussion /Remarks (Chair /Co-Chair) |
| 17.00-17.15 | Tea Break |

2nd Day (Jan 8, 2022)

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| 09.30-11.45 | Plenary Session III Venue: Vidyapati Sabhaghar |
| Chair | Dr. S. R. Chowdhury, Dean Basic Science |
| Co-Chair | Dr. M. Thudi, AB&MB |
| Rapporteurs | Dr. Nilanjay, PBG, Dr. Sankar Jha, Soil Science, and, RPCAU., Pusa |
| Session Co-ordinator | Dr. Kumari Anjani and Dr. Sangita Sahni |
| 09.30-09.50 | Plant-microbe interactions and the systemic immune response <i>Dr. Aardra Kachroo, University of Kentucky, USA</i> |
| 09.50-10.10 | Translational genomics for improvement of horticultural crops <i>Dr. Umesh K. Reddy, West Virginia University, USA</i> |
| 10.10-10.30 | Climate Smart Food Legumes for Sustainable agriculture under changing climate <i>Dr. Shiv Kumar Agarwal</i> |
| 10.30-10.50 | Sw5a: The Trojan Horse against ToLCNDV infection in tomato <i>Dr. Manoj Prasad, NIPGR, New Delhi</i> |
| 11.10-11.30 | Discussion/Remarks (Chair /Co-Chair) |
| 11.30-11.50 | Tea Break |

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| 11.50-13.30 | Theme I: Biotechnological Intervention for Crop Improvement Venue: Vidyapati Sabhaghar |
| Chair | Dr. Mithilesh Kumar, RPCAU, Pusa |
| Co-Chair | Dr. Rajeev Kumar, AB&MB, RPCAU, Pusa |
| Rapporteurs | Dr. Nishi Kesari, Nematology, RPCAU, Pusa and Dr. Shanti Bhushan, VKS CoA, Dumraon |
| Session Co-ordinator | Dr. M. S. Sai Reddy, Entomology and Dr. Sarita Kumari |
| | Lead lectures |
| 11.50-12.05 | Genetic, metabolomic, and molecular breeding of colored peanut <i>Dr. Chuanzhi Zhao, Institute of Biotechnology, Shandong Academy of Agricultural Science, China</i> |
| 12.20-12.35 | Pulses at crossroads: Time to embrace Innovations <i>Dr. Alok Das, ICAR-Indian Institute of Pulses Research, Kanpur</i> |
| 12.40-12.50 | Plant trait improvement by breeding and biotechnological interventions <i>Dr. Sunayana Rathi, AAU, Jorhat</i> |
| | Oral Presentations |
| | High density genetic variation maps reveal key candidate loci and genes associated with important agronomic traits in peanut <i>Huiling Zhao, Shandong Academy of Agricultural Sciences, Jinan, China</i> |
| | De novo Assembly and Characterization of Defensive Genes of the Transcriptome of Garlic (<i>Allium sativum</i> L.) using Illumina Paired-End Sequencing <i>Jitender Singh, University of Agriculture and Technology, Meerut, Uttar Pradesh, India</i> |
| | Genome Packaging and Virus Assembly Process: A Strategy to Combat Plant Viruses <i>Tushar Ranjan, Bihar Agricultural University, Sabour, Bhagalpur, Bihar</i> |
| | Over expression of EaNF- Y transcriptional factor in sugarcane enhanced the tolerance to low moisture stress <i>Appunu Chinnaswamy, ICAR Sugarcane Breeding Institute, Coimbatore, India</i> |
| | Golden Opportunities for 'Golden fibre' Quality Improvement of Jute <i>Shuvobrata Majumder, Institute of Life Sciences, Bhubaneswar</i> |
| | Brassinolide and Zinc influencing physio-biochemical traits of garden pea (<i>Pisum sativum</i> L.) under water deficit condition <i>Jyostnarani Pradhana, RPCAU, Pusa</i> |
| | Effect of drought stress on Non-photochemical quenching (NPQ) of rice genotypes <i>Sareeta Nahakpam, Bihar Agricultural University, Sabour, Bhagalpur, Bihar</i> |
| | Candidate gene association study for identification of glucosinolate biosynthesis genes in broccoli (<i>Brassica oleracea</i> L. var. <i>italica</i>) <i>Ranjan Kumar Shaw, Zhejiang Academy of Agricultural Sciences</i> |
| | Role of microRNAs in water logging stress tolerance in pigeonpea (<i>Cajanus cajan</i> (L.) Millsp.) <i>Dharamsheela Thakur, Bihar Agricultural University, Sabour, Bhagalpur, Bihar</i> |

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| | Effect of herbicides on phenol metabolism and kinetics of phenylalanine ammonia lyase enzyme in wheat seedlings <i>Hemlata Singh, RPCAU, Pusa</i> |
| | Identification of molecular marker linked to resistance gene loci against Indian isolate of Phytophthora capsici L. causing root rot in chilli (Capsicum annum L.) <i>Manish Kumar, Maharana Pratap Horticultural University, Karnal</i> |
| | A Novel Microbial Consortiumbased Liquid Formulation for Biological Treatment of Wastewater <i>Aman Jaiswal, RPCAU, Pusa</i> |
| | Transcriptome analysis-based on RNA-Seq in the elucidation of phomopsis blight resistance mechanism in Brinjal <i>Tribhuvan Kumar, BAU, Sabour</i> |
| | Candidate gene based allele mining for oil content in safflower (Carthamus tinctorious L.) <i>Usha Kiran Betha, ICAR-Indian Institute of Oilseeds Research, Rajendranagar, Hyderabad</i> |
| | Genome-wide identification and analysis of NBS-LRR genes family in mungbean (Vigna radiata L. Wilczek) <i>Shalini Purwar, Banda University of Agriculture and Technology, Banda</i> |
| | SIDEAD35, a putative DEAD-box RNA helicase plays role in providing tolerance against Tomato leaf curl New Delhi virus (ToLCNDV) in tomato <i>Saurabh Pandey, National Institute of Plant Genome Research, New Delhi</i> |
| | Impact of elevated temperature stress on aroma and its gene expression in photosensitive basmati rice <i>Gargi, College of Biotechnology, Sardar Vallabh bhai Patel University of Agriculture & Technology Meerut, Uttar Pradesh, India</i> |
| | Identification and characterization of MADS box gene in pigeonpea, their wild relatives and their comparative phylogeny with grain legumes <i>Kuldeep Kumar, IICAR-National Institute for Plant Biotechnology, New Delhi, India.</i> |
| | Differential response of fragrance gene expression in PB1121 to different sowing conditions <i>Monika Chaudhary, Sardar Vallabhbhai Patel University of agriculture and technology, Meerut, UP</i> |
| | Interrogation of molecular anatomy of a key antioxidant defense enzyme catalase in different Brassica oilseeds to evolve stress-resilient varieties <i>Chinmaya Kumar Das, OUAT Bhubaneswar</i> |
| | Host-induced RNA interference targeting a gut osmoregulatory gene impaired parthenogenetic reproduction of phloem - feeding insect Lipaphis erysimi <i>Deepa Dhatwalia, National Institute for Plant Biotechnology, IARI Campus, New Delhi, India</i> |
| | DNA barcoding : A new tool for germplasm characterization <i>Prasenjit Paul, RPCAU, Pusa</i> |
| | Genomics in chickpea: a boon for breeders <i>Zafar Imam, BAU, Sabour</i> |
| | GREEN BIOTECHNOLOGY- a step towards pollution free agriculture <i>Seema Horo, Birsa Agricultural University, Kanke, Ranchi</i> |
| | Study of changes in growth parameters under salt stress in chickpea genotypes <i>Palak Jain, National Institute for plant biotechnology, New Delhi</i> |
| | Genetic diversity analysis reveals selection signatures for climate resilience in Gir and Tharparkar cattle <i>Nidhi Sukhija, NDRI</i> |
| 13.15-13.30 | Discussion/Remarks (Chair /Co-Chair) |
| | Lunch Break |

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| 15.00-16.30 | Plenary Session IV |
| | Venue: Vidyapati Sabhaghar |
| Chair | Dr. Priti Krishna, Western Sydney University, NSW, Australia |
| Co-Chair | Dr. Bishun Deo Prasad, AB&MB, RPCAU, Pusa |
| Rapporteurs | Dr. Tushar Ranjan, BAU, Sabour and Dr. Mithilesh Kumar Singh |
| Session Co-ordinator | Dr. Kumari Anjani |
| | Keynote address |
| 15.00-15.20 | Investigating the Cell Biology of Rice Infection by the Blast Fungus Magnaporthe oryzae <i>Dr. Nicholas J Talbot, Norwich Research Park, University of East Anglia, Norwich, UK</i> |
| | Lead lectures |
| 15.20-15.45 | Biotechnological Initiative for Climate Resilient Agriculture: the context of Ethiopian |

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| | legumes research and development <i>Dr. Asnake Fikre, Ethiopian institute of Agricultural Research, Addis Ababa, Ethiopia</i> |
| 15.45-16.00 | Engineering photosynthesis for climate-change ready crops: a gene finding story of an anatomical component of C4 plants <i>Dr. Vivek Thakur, University of Hyderabad</i> |
| 16.00-16.15 | Development of an efficient SNP-chip: a special reference to cattle <i>Dr. Sarwar Azam, National Institute of Animal Biotechnology, Hyderabad</i> |
| 16.15-16.30 | Discussion/Remarks (Chair /Co-Chair) |

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| 16.30-17.30 | Poster presentations (Offline) |
| | Venue: Vidyapati Sabhaghar |
| Judges | Dr. S. R. Chowdhury, Dean Basic Science |
| | Dr. V. K. Sharma, AB&MB, RPCAU, Pusa |
| | Dr. Rajeev Kumar, AB&MB, RPCAU, Pusa |
| | Dr. Rajesh Kumar, PBG, RPCAU, Pusa |
| | Dr. Sangita Sahni, PP, RPCAU, Pusa |
| | Dr. Sunayana Rathi, AAU, Jorhat |
| Rapporteurs | Dr. R. N. Bahuguna, PGCA, Pusa, Dr. Arshad Anwar, BAU, Sabour and Dr. Surojit Sen, <i>Dibrugarh University, Assam</i> |
| Session Co-ordinator | Dr. Biswajit Pramanick, PGCA, Pusa, |
| 17.30-17.45 | Discussion /Remarks by Judges |

2nd Day (Jan 8, 2022)

Concurrent sessions

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| 10.00-11.00 | Theme II: Genome Editing |
| Venue: Conference Hall, Centre of Excellence on Water Management | |
| Chair | Dr. Bishun Deo Prasad, AB&MB, RPCAU, Pusa |
| Co-Chair | Dr. Satendra Kumar Mangrauthia, ICAR-Indian Institute of Rice Research, Hyderabad |
| Rapporteurs | Dr. Hemlata Singh, Biochemistry, RPCAU, Pusa and Dr. Ravi Ranjan Kumar, BAU, Sabour |
| Session - Coordinator | Dr. S.K.Patel and Dr. Sangita Sahni |
| Lead lectures | |
| 10.00-10.15 | Genome Editing : New Breeding Tool for Crop Improvement <i>Satendra Kumar Mangrauthia, ICAR-Indian Institute of Rice Research, Hyderabad</i> |
| 10.15-10.30 | Phytosulfokine Receptor Kinase: The missing link in ABA dependent abiotic stress response in plants <i>Ananda Mustafiz, South Asian University, New Delhi, India</i> |
| Oral Presentation | |
| | CRISPR-Cas9-Mediated Genome Editing of Rice towards Disease Resistance <i>Diksha Kumari, Banaras Hindu University, Varanasi, UP</i> |
| | Genome editing for enhancing disease resistance in crop plant <i>Dilip Chaurasia, Dr. Rajendra Prasad Central Agricultural University, Pusa</i> |
| | CRISPR/Cas9 based genome editing in plants <i>S.R.Harish Chandar, Centurion University of Technology and Management</i> |
| 10.40-10.50 | Discussion /Remarks (Chair /Co-Chair) |
| 10.50-11.00 | Tea Break |

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| 11.00-12.30 | Theme IV: Plant Tissue Culture |
| Venue: Conference Hall, Centre of Excellence on Water Management | |
| Chair | Dr. Mithilesh Kumar, DR, RPCAU Pusa and Dr. M. Feza Ahmad, BAU, Sabour |
| Co-Chair | Dr. Ninadri Bag, Sikkim University, Gangtok, India and Dr. Sunayana Rathi, AAU, Jorhat |
| Rapporteurs | Dr. Khemraj Meena, Microbiology, Dr. Ajay Kumar, PBG (Maize) RPCAU, Pusa Dr. Niharika Kanth |
| Session Co-ordinator | Dr. Kumari Anjani and Dr. Bishun Deo Prasad |
| Lead Lectures | |
| 11.00-11.15 | Enhancement of Horticultural Production through Biotechnology <i>M. Feza Ahmad, Associate Director Research, BAU, Sabour</i> |
| 11.15-11.30 | In vitro rooting, biological and physical hardening of micropropagated tea – steps towards commercialization of tissue culture raised tea plants <i>Niladri Bag, Department of Horticulture, Sikkim University, Gangtok, India</i> |
| Oral Presentations | |
| | Commercial Tissue Culture: Boon to marginal farmers and entrepreneurs <i>Awadhesh Kumar Pal, Bihar Agricultural University</i> |
| | Assessment of Regenerative Response of Midlate sugarcane varieties under in vitro condition <i>Dharm Nath Kamat Sugarcane Research Institute, RPCAU, Pusa</i> |
| | Use of Inflorescence as an alternative source of explant for date palm tissue culture <i>Yuvrajsinh K Vala, Date palm tissue culture Laboratory, Kutch Crop Services Pvt Ltd, Mundra (Kutch), Gujarat, India</i> |
| | Optimizing in vitro regeneration in popular mungbean cultivar Samrat <i>Ayushi Tripathi, Amity Institute of biotechnology, Amity University, UP, India</i> |
| | An improved protocol for efficient Regeneration and Transformation of yellow spice <i>Curcuma longa</i> cv.Duggirala <i>Dhondi Prasanna, Telangana University, Telangana</i> |
| | Optimizing in vitro regeneration in popular mungbean cultivar Samrat |

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| | <i>Meenal Rathore, ICAR-Indian Institute of Pulses Research, Kanpur</i> |
| | Fortification of MS medium with quercetin and assessment of soybean (<i>Glycine max</i> (L.) Merrill) performance under salinity stress <i>Krishnagowdu Saravanan Bharathiar University, Coimbatore, Tamil Nadu, India</i> |
| | Establishment and phytochemical analysis of callus culture from an endangered medicinal Plant (<i>Hemidesmus indicus</i> L. R. Br) <i>Jayachandran Halka, Bharathiar University, Coimbatore, Tamil Nadu, India</i> |
| | Efficient shoot regeneration is the pre-requisite for wheat improvement through <i>in vitro</i> methods <i>Shahnishan Tabassum, BAU, Sabour</i> |
| | Exploring the <i>in vitro</i> supplemental effects of IFNt, progesterone and LPS on bovine neutrophils to understand neutrophilic response towards pregnancy vs pathological signals <i>Akanksha Gupta, CIRB Hissar</i> |
| 12.15-12.30 | Discussion /Remarks (Chair /Co-Chair) |
| 12.30-12.45 | Tea Break |

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| 12.45-13.30 | Theme VII: Post-Harvest Technology |
| | Venue: Conference Hall, Centre of Excellence on Water Managment |
| Chair | Dr. S. K. Patel, CAE, RPCAU, Pusa |
| Co-Chair | Dr. Rajesh Kumar, PBG, RPCAU, Pusa |
| Rapporteurs | Dr. Dinesh Rai, Plant Pathology, Dr. A. K. Pal, BAU, Sabour, Prakash Singh, VKS CoA, Dumraon |
| Session Co-ordinator | Er. Anupam Amitabh, SRI, RPCAU, Pusa and Er. Jaya Sinha |
| | Oral Presentation |
| | Eco-safe composite edible coating of hydrocolloids with papaya leaf extract improves post-harvest quality and shelf life of papaya fruit under ambient storage <i>K Prasad, TCA Dholi, RPCAU, Pusa</i> |
| | Evaluation of oyster and milky mushroom for their suitability <i>Heera G, College of Agriculture, Vellayani</i> |
| | Effect of Storage Life of Rice Bran on the Health value of rice bran oil <i>Sunil Kumar, Veer Kunwar Singh College of Agriculture, Dumraon</i> |
| | Assessment of Mycoflora Associated with Different Stored Grain Samples from Sitamarhi District of Bihar <i>Kanchan G. Choudhary, Patna University</i> |
| | Good agriculture practices adopted in horticulture for boosting the ndian economy <i>Sudheer Kumar Yadav, BabasahebBhimraoAmbedkar University, Lucknow</i> |
| | Effect of Ethanolic extract of Neem & Tulsi for repellency and mortality against the larva of <i>Tenebrio molitor</i> (Tenebrionidae) <i>S. M. Mahboob Hassan & Pintu Kumar shaw, Patna University, Patna, Bihar</i> |
| | <i>Phyllanthus niruri</i> Linn. : Phytochemical, Pharmacological and Therapeutic aspects <i>Vinay Bhushan Kumar, Patliputra University</i> |
| | Rapid Physical Characterization of Mangoes Using Reflected UV Image Processing <i>Krishna Kumar Patel, Department of Agricultural Engineering, Post Graduate College, Ghazipur</i> |
| | Phytochemical properties of <i>Ricinus communis</i> <i>Seema, NCOH, Noorsarai</i> |
| | Post-harvestand processing technology of mushroom <i>Santosh Kumar, BAU, Sabour</i> |
| 13.15-13.30 | Discussion /Remarks (Chair /Co-Chair) |
| | Lunch Break |

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| 14.30-17.00 | Theme V: Host-Pest/Pathogen interaction |
| Venue: Conference Hall, Centre of Excellence on Water Management | |
| Chair | Dr. S. K. Singh, ADR, RPCAU, Pusa |
| Co-chair | Dr. Sangita Sahni, PP, RPCAU, Pusa |
| Rapporteurs | Dr. Minakshi Divedi, SRI, Pusa, and Dr. Vinod Kr. VKS CoA, Dumraon |
| Session Co-ordinator | Dr. Nishi Keshri Nematology and Dr. Aman Jaiswal, Microbiology |
| Lead lectures | |
| 14.30-14.45 | Soil salinity increases virulence in the soil borne pathogen <i>Fusarium oxysporum</i> f.sp. <i>ciceris</i> <i>Dr. B. K. Sarma, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi</i> |
| 14.45-15.00 | Brassinosteroid mediated diseases resistance <i>Sangita Sahni, TCA, Dholi, Dr. Rajendra Prasad Central Agricultural University, Pusa</i> |
| Oral Presentation | |
| | Effect of abiotic factors on host plant and insect pest interaction in sweet potato <i>Gouri Shankar Giri, TCA, Dholi, Dr. Rajendra Prasad Central Agricultural University, Pusa</i> |
| | Silver and Zinc Nanoparticles Modulates Aggressiveness of <i>Bipolaris Sorokiniana</i> in Barley <i>Abhijeet Ghatak, BAU, Sabour</i> |
| | Role of Phosphate Solubilizing Bacteria in Sustainable Agriculture <i>Khushboo Kumari, Mahatma Gandhi Central University, Motihari</i> |
| | Management of Root knot nematode in Tomato <i>KVK, Sheohar, Dr. Rajendra Prasad Central Agricultural University, Pusa</i> |
| | Seasonal fluctuation and impact of Integrated Pest Management technology for sucking pests of Bt cotton under Punjab conditions <i>Amandeep Kaur, Punjab Agricultural University</i> |
| | Screening of eggplants and F1 hybrids against bacterial wilt (<i>Ralstonia solanacearum</i>) prevalent race 1, phylotype 1 in sikkim <i>Bahadur Singh Bamaniya, Sikkim university</i> |
| | Screening Luffa germplasm and advance breeding lines for resistance to Tomato Leaf Curl New Delhi Virus <i>Manpreet Kaur. CSK Himachal Pradesh Agricultural University, Palampur</i> |
| | <i>Trichoderma asperellum</i> T42 recruit bacterial classes for nitrogen fixation and nutrient mobilization in chickpea rhizosphere <i>Md. Mahtab Rashid, Bihar Agricultural University, Sabour</i> |
| | Comparative efficacy of fungicide against <i>Rhizctonia solani</i> caused by banded leaf and sheath blight in corn <i>Poonam Yadav, RCA, MPUAT, Udaipur</i> |
| | Comparative Study of Local and Commercial Strain of Entomopathogenic Fungi Against Third Instar Larvae of <i>Helicoverpa armigera</i> (Hübner). <i>Ajeet Kumar, Patna University, Patna</i> |
| | Stable expression of cellulase in <i>Alternaria brassicicola</i> infecting mustard under warmer conditions <i>Chanda Kushwaha, Bihar Agricultural University, Sabour</i> |
| | Biological Control of Soil Borne Diseases of Different Vegetable Crops of Nalanda District <i>Shweta Kumari, Patna University</i> |
| | Functional Role of secondary metabolites in <i>Magnaporthe oryzae</i> <i>Pallabi Saha, National Institute of Technology, Durgapur</i> |
| | Insect pest's interaction with Tissue culture banana (Grand Naine:G9) in Koshi region of Bihar <i>Shyam Babu Sah, Mandan Bharti Agriculture College, Agwanpur, Saharsa</i> |
| | Essential oils as a potent biocontrol agent for the effective management of plant pathogens <i>Anand Milan, Acharya Narendra Deva University of Agriculture & Technology, Ayodhya</i> |
| | Molecular Diagnostic Tools for Sugarcane Red Rot Disease <i>Md. Minnatullah, RPCAU, Pusa</i> |

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| | <p>Potential of local <i>Trichoderma asperellum</i> against <i>Fusarium spp.</i> <i>Dinesh Rai, RPCAU, Pusa</i></p> |
| | <p>Diagnostics tools for Detection of Citrus Yellow Mosaic Virus (CYMV) & Citrus Greening Bacterium (CGB) in Sweet Orange by Multiplex PCR <i>K. N. Gupta, JNKV, Jabalpur</i></p> |
| | <p>Developed techniques for a rapid membrane- based viral dna isolation method for the polymerase chain reaction <i>Kailash Narayan Gupta, JNKV, Jabalpur</i></p> |
| | <p>RNA sequencing of <i>Magnaporthe oryzae</i> histidine phosphotransferase knockdown mutant reveals an important role in stress response and pathogenicity <i>Varsha C Mohanan, St. Mary's College, Thrissur, Kerala</i></p> |
| | <p>Molecular Characterization and Phylogenetic Diversity of <i>Bemisia tabaci</i> complex in Bihar <i>M. S. Sai Reddy, Dr. Rajendra Prasad Central Agricultural University, Pusa</i></p> |
| 16.45-17.00 | Discussion /Remarks (Chair /Co-Chair) |

3rd Day (Jan 9, 2022)

| 10.00-13.30 | Theme III: Molecular Breeding |
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| | Venue: Vidyapati Sabhaghar |
| Chair | Dr. N. K. Singh, ADR, RPCAU, Pusa |
| Co-Chair | Dr. Satish Kumar Singh, RPCAU, Pusa |
| Rapporteur | Dr. Ashim Mishra, TCA, Dholi, Dr. Sunita Meena, SRI, Pusa, Dr. Sanjay Singh |
| Session Co-ordinator | Dr. Sarita Kumari, AB&MB and Dr. Ashutosh Singh |
| | Lead Lectures |
| 10.00 -10.15 | Morphology and genic-SSRs-based diversity analysis and georeferencing of economic traits in natural populations of Jack (<i>Artocarpus heterophyllus</i> Lam.) from Eastern India <i>Dr. Shashi Bhushan Choudhary, ICAR-National Bureau of Plant Genetic Resources, Regional Station Ranchi, Jharkhand, India</i> |
| 10.15-10.30 | Climate Resilient Small Millets : A Way to Ensure Sustainable Food and Nutritional Security <i>Dr. Satish Kumar Singh, PBG, Dr. Rajendra Prasad Central Agricultural University, Pusa</i> |
| 10.30-10.45 | Enhancing stress-resilience in wheat compatible to the agroecology of Bihar <i>Dr. Rajeev Kumar, AB&MB, RPCAU, Pusa</i> |
| 10.45-11.00 | Rapid identification of candidate genes and development of markers associated with early flowering and enhanced seed size in chickpea (<i>Cicer arietinum</i> L.) using MutMap approach <i>Dr. Mahendar Thudi, AB&MB, RPCAU, Pusa</i> |
| | Oral Presentations |
| | Marker assisted selection for semi-dwarfing (sd1) and fragrance (fgr) gene in the segregating population of aromatic rice landraces of Bihar <i>Mankesh Kumar, Bihar Agricultural University, Sabour</i> |
| | Molecular divergence in Yam bean varieties (<i>Pachyrhizus erosus</i> L. Urban) on the basis of SSR markers <i>Ashish Narayan, RPCAU, Pusa</i> |
| | New and common genomic regions underpinning rust resistance and mineral accumulation in an association mapping wheat panel <i>Deepak Baranwal, Bihar Agricultural University, Sabour</i> |
| | Participatory hybrid paddy seed production program in Bihar –current status and future prospect <i>Ravi Kant, PBG, RPCAU, Pusa</i> |
| | Association studies in rice (<i>Oryza sativa</i> L.) germplasm <i>Shanti Bhushan, BAU, Sabour</i> |
| | Mining and characterization of high quality SNP/Indels in Euphorbiaceae <i>Surojit Sen, Dibrugarh University, Assam</i> |
| | Gene pyramiding- A technique for developing durable resistance in crops <i>Lekhana M V, PBG, RPCAU, Pusa</i> |
| | A simple, rapid and low-cost method of DNA extraction for marker assisted breeding in rice (<i>Oryza sativa</i> L.) <i>Digvijay Singh, Bihar Agricultural University, Sabour</i> |
| | Molecular Characterization of Maize (<i>Zea mays</i> L.) Inbred Lines using SSR Markers <i>Ajay Kumar, TCA, Dholi</i> |
| | MAGIC: A novel mapping population in crop improvement <i>Niranjan Kumar Chaurasia, M S Swaminathan School of Agriculture, Centurion University of Technology and Management</i> |
| | Morphological assessment rice (<i>Oryza sativa</i> L.) in relation to drought tolerance <i>Pankaj Kumar, AB&MB, RPCAU, Pusa</i> |
| | Marker Assisted Breeding for the Improvement of Sita in water-scarce irrigated areas of Bihar for Aerobic condition by Introgression of qDTY1.1 from Nagina-22 <i>Anand Kumar, BAU, Sabour</i> |
| | Mapping and validation of QTLs linked to candidate genes for leaf area and oil to dry mesocarp in oil palm using genomics approaches <i>B Kalyana Babu, ICAR-Indian Institute of Oil Palm Research, Pedavegi, AP</i> |
| | Mapping QTLs for yield traits in bitter melon (<i>Momordica charantia</i> L.) using genome-wide microsatellite markers <i>Shivaji Ajinath Lavale, CPBMB, Kerala Agricultural University, Thrissur</i> |
| | Genotyping by Sequencing (GBS) : A tool for high throughput Genotyping and Genome-wide SNP Discovery in Rice <i>Sweta Sinha, BAU, Sabour</i> |

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| | Breeding approaches to development of Climate-Resilient-Crops <i>Manoj Kumar, BAU, Sabour</i> |
| | Development of genomic tools to improve seed quality traits in groundnut <i>Sunil S Gangurde, University of Georgia, Tifton Campus</i> |
| | Genetic improvement in linseed for climate resilience agriculture <i>R. B. P. Nirala, BAU, Sabour</i> |
| | Enhancement of Rice-Wheat productivity through Technological Innovations <i>R. C. Srivastava, N. K. Singh, Nilanjaya*, S K Singh, Vipin Kumar & M. K. Singh, RPCAU, Pusa</i> |
| | Genomics in chickpea: a boon for breeders <i>Rafat Sultana, BAU, Sabour</i> |
| | Genetic Diversity study in Sesame (<i>Sesamum indicum</i> L.) <i>Prathyusha Cheguri, BAU, Sabour</i> |
| | Effect of zinc application on wheat (<i>Triticum aestivum</i> L.) biofortification <i>Rakesh Deo Ranjan, BAU, Sabour</i> |
| | Association Mapping: an approach towards crop Improvement <i>Surabhi Sinha, BAU, Sabour</i> |
| | Assessment of Genetic Variability, Correlation and Path Analysis in Chickpea (<i>Cicer arietinum</i> L.) germplasm under normal sown condition of Bihar <i>Sanjay Kumar, BAU, Sabour</i> |
| | Allelopathic effect of <i>Withania somnifera</i> (Dunal) on germination of wheat <i>Muneshwar Prasad Mandal, BAU, Sabour</i> |
| | Advances in Garlic Improvement Techniques: A Review <i>Sangeeta Shree, BAU, Sabour</i> |
| | Genetic variability and parental polymorphism survey in relation to phosphatidylcholine content in soybean (<i>Glycine max</i>) <i>Aseem Kumar Anshu, Devi Ahilya Vishwavidyalaya</i> |
| | Genetic Advance and Genetic variability present in Onion genotypes <i>Richa Pyasi, College of Agriculture, Gwalior</i> |
| | Heterosis and combining ability analysis of single crosses in maize (<i>Zea mays</i> L.) <i>VinayRojaria, ICAR-IARI Pusa New Delhi</i> |
| | A decade of sunflower genetic resources management research activities in India <i>Mangesh Y. Dudhe, ICAR-Indian Institute of Oilseeds Research</i> |
| | Molecular Diversity in Sesame (<i>Sesamum indicum</i> L) using SSR Markers <i>Sima Sinha, BAU, Sabour</i> |
| | Role of epigenetic in crop improvement <i>Ponselvan A, Centurion University of Technology and Management</i> |
| | Validation and identification of SSR marker associated with mungbean yellow mosaic ... <i>Sugandh Suman, RRS DCE, Begusarai</i> |
| | Analysis of Genetic Diversity among Grasspea (<i>Lathyrus sativus</i> L.) germplasm using SSR markers <i>Nimmy Manduparambil Subramanian, ICAR-IARI, New Delhi</i> |
| | Stability Analysis for Grain Yield in Lentil Using AMMI Model <i>Harsh Deep, GBPUAT Pantnagar</i> |
| | Volatile profiling as a tool to validate putative mutants of polyembryonic mango genotype Nekkare <i>Nusrat Perveen, ICAR- Indian Agricultural Research Institute, New Delhi</i> |
| | Reverse Breeding <i>B. Edukondalu, College of Agriculture, Rajendranagar (PJ TSAU), Hyderabad</i> |
| | Variability studies for olitorius jute germplasm lines <i>Vinod Kumar Singh, VKSCOA, Dumraon, Buxar</i> |
| | RNA sequencing reveals key genes for root lesion nematode resistance in chickpea <i>Sonal Channale, University of Southern Queensland, Australia</i> |
| 13.15-13.30 | Discussion /Remarks (Chair /Co-Chair) |
| | Lunch Break |

3rd Day (Jan 9, 2022)

Concurrent sessions

| 10.00-12.30 | Theme VIII: Soil Health Management |
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| Venue: Conference Hall, Centre of Excellence on Water Management | |
| Chair | Dr. M. C. Manna, Head Soil Science, RPCAU, Pusa |
| Co-Chair | Dr. Ranjan Laik, Prof. Soil Science & DSW, RPCAU, Pusa |
| Rapporteurs | Dr. C. K. Jha, RPCAU, Pusa and Kaushal Kishore |
| Session Co-ordinator | Dr. Nilanjaya, PBG and Er.Vikas Rai |
| Lead Lectures | |
| 10.00-10.15 | Prospects of biopesticides in managing plant and soil health <i>Dr. H.B. Singh, Department of Biotechnology, GLA University, Mathura</i> |
| 10.15-10.30 | Innovation and Advocacy for Climate Resilient Small-Scale Producers <i>Dr. Sanjeet Kumar, Agriculturist: Small-Scale Producers Formerly Plant Breeder, ICAR-Indian Institute of Vegetable Research, Varanasi, India & World Vegetable Center, Tainan, Taiwan</i> |
| 10.30-10.45 | Biotechnology for Arsenic mitigation <i>Bishun Deo Prasad, RPCAU, Pusa</i> |
| Oral Presentations | |
| | Microbial Degradation of Petroleum-Contaminated Soil <i>Salim Ahmed, Mahatma Gandhi Central University, Motihari</i> |
| | Long term effect of fertilization and manuring on stabilization of carbon in four soil orders of India <i>Vandana Kumari, RPCAU, Pusa</i> |
| | Evaluation of stability and maturity indices of general and household vermicompost and its impact on soil health <i>Rajesh Kumar, RPCAU, Pusa</i> |
| | Bacillus subtilis as plant growth promoting rhizobacteria and their siderophoregenesis <i>Sonali kumara, Patna University</i> |
| | Potassium and phosphorus solubilizing bacteria: a valorisation approach in recycling waste mineral to wealth through in-vitro solubilisation <i>Debabrata Nath, RPCAU, Pusa</i> |
| | Effect of conservation agriculture on physico-chemical properties of alluvial soil <i>Sunil Kumar, BAU, Sabour</i> |
| | Characterization of Rhizobium Species of Tal land <i>Geeta Kumari, RPCAU, Pusa</i> |
| | Soil Health Management in Litchi orchards <i>Prabhat Kumar, RPCAU, Pusa</i> |
| | Evaluation of stability and maturity indices of general and household vermicompost and its impact on soil health <i>Jai Prakash Prasad, RPCAU, Pusa</i> |
| | A study on “Effect of exogenous supplementation of Spermidine in decreasing salinity stress in Gerbera jamesonii” <i>Javeria Uzma Sai, Telangana University</i> |
| | Crop residue management: challenges & solution <i>Sarvesh Kumar Dubey, Anduat Kumarganj Ayodhya</i> |
| | Significance of PSB in and at Rhizospheric Region of Eclipta alba, as an Alternative Approach to Chemical Fertilizers <i>Nivedita Sharma, Patna University</i> |
| | Arsenic Contamination in drinking water in Gangetic Plains of Saran, Vaishali & Patna districts of Bihar <i>Sanjay Kumar Singh, TCA, Dholi</i> |
| | Phytoremediation: A Promising Approach for heavy metal-polluted land <i>Sardar Sunil, NCOH, Noosarai</i> |
| | Isolation and screening of the microorganisms present in the rhizosphere of Litchi chinensis <i>Khirabdhi Tanaya, Mahatma Gandhi Central University, Motihari</i> |
| | Effect of Soil depths and tillage practices on biological properties in soils of Eastern Himalayan Region, India <i>Kaberi Mahanta, Horticultural Research Station, AAU, Kahikuchi, Guwahati</i> |
| | Soil bacterial diversity regulating soil properties in plantation soils |

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| | <i>Chowlani Manpoong, Arunachal University of Studies</i> |
| | Physical Feature of Proposed KOSI - MACHI River Interlinking Project <i>Pankaj Kumar Aditya, Patna University</i> |
| | Screening of Magnetite-Cellulose Composites and Assessment of Best Composite for its Pesticide Removal Potential <i>Anirban Sil, ICAR- Indian Agricultural Research Institute, New Delhi</i> |
| | Soil health management <i>Khushi Sharma, Sam Higginbottom University of Agriculture, Technology and Sciences</i> |
| | Nature Interpretation Sites (NIS) A New Hope For Conservation of Aconitum heterophyllum Wall. Ex Royle In Higher Himalayan Regions of Uttarakhand. Ecology in Indian Himalayan Regions <i>Jaidev Chauhan, Hemvati Nandan Bahuguna Garhwal University</i> |
| | Assessment of physico-chemical parameters of soil at Vaigai reservoir in Theni District, Tamilnadu, India <i>Anitha Mary. A, Jayaraj Annapackiam College for Women</i> |
| | Impact of tillage systems on soil enzyme activity and soil organic carbon in Basmati rice-wheat cropping system in Punjab <i>Garcha S, Punjab Agricultural University, Ludhiana</i> |
| | Use of bacteria in pond water <i>Maryam Parween, L.N.M.U Darbhanga</i> |
| | Comparative Phenomics and Transcriptomic analysis between Soybean and cowpea reveals mechanism underpinning water use strategies. <i>Arun Kumar Pandey, College of Life Sciences, China Jiliang University, China</i> |
| 12.15-12.30 | Discussion /Remarks (Chair /Co-Chair) |

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| 12.00-13.00 | Theme VI: Bioinformatics & Nanotechnology |
| | Venue: Conference Hall, Centre of Excellence on Water Management |
| Chair | Dr. Mithilesh Kumar, DR, RPCAU, Pusa |
| Co-Chair | Dr. Sweta Mishra, PBG, RPCAU, Pusa |
| Rapporteurs | Dr. Gita Kumari, Microbiology, and Dr. R.K. Ranjan, Plant Pathology, RPCAU, Pusa |
| Session Co-ordinator | Dr. Sumeet Kumar Singh and Dr. S.P.Singh |
| | Oral Presentations |
| | Whole Genome Sequencing and bioinformatic analysis of potato leaf roll virus isolates of Bihar <i>Ravi Ranjan Kumar, BAU, Sabour</i> |
| | Forecasting of groundnut yield in Tamil Nadu through Auto-Regressive Integrated Moving Average (ARIMA) models <i>Mahesh Kumar, RPCAU, Pusa</i> |
| | Non-parametric Assessment of Temporal Dynamics of Climate-Smart Cereal Ragi in India <i>Nidhi, RPCAU, Pusa</i> |
| | Use of Nanoparticles in Plant Pathogen Control <i>Jamuna Bai Aswathanarayan, JSS Academy of Higher Education and Research</i> |
| | Carbon nanoparticles influences the flowering time in <i>Arabidopsis thaliana</i> <i>Abhishek Kumar, Rani Lakshmi Bai Central Agricultural University Jhansi U.P</i> |
| | Green synthesis of zinc oxide nanostructures using <i>Annona Squamosa</i> plant and its impact on plant growth <i>Aman Savita, CSIR-Central Institute of Medicinal & Aromatic Plant, Lucknow</i> |
| | The role of nanoparticles in sustainable agriculture <i>Richa Singh, Sam Higginbottom University Of Agriculture, Technology & Sciences, Prayagraj, Uttar Pradesh</i> |
| | Utilization and Future Prospects of Zinc and Titanium Nanoparticles for Aggressiveness and Melanin Biosynthesis Alteration in <i>Bipolarissorokiniana</i> <i>Anshu Kumar, Bidhan Chandra Krishi Viswavidyalaya</i> |
| | Metabolomics of developing anthers and sepals influenced by salicylic acid functionalized nanochitosan apticles to attenuate damages under heat stress in cotton: a precision farming <i>Khyati Rasikbhai Savani, Junagadh Agricultural University, Gujarat</i> |

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| | Green synthesis of silver nanoparticles using medicinal plant alstonia scholaris and its characterization <i>Jyoti Kumari, Patliputra University</i> |
| | Green synthesis” of nanoparticles for sustainable development <i>Kumari Shashi Bala, NCOH, Noorsarai</i> |
| | Application of Nano-Fertilizer in Horticultural Crops <i>Nikhil Parihar, R.V.S.K.V.V., Gwalior M.P</i> |
| 12.15-12.30 | Discussion /Remarks (Chair /Co-Chair) |
| | Tea Break |

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| 12.45-13.50 | Plenary Session V Venue: Conference Hall, Centre of Excellence on Water Managment |
| Chair | Dr. V. K. Sharma, HoD, AB&MB |
| Co-Chair | Dr. Mahendar Thudi, AB&MB |
| Rapporteurs | Dr. Kumari Anjani, AB&MB, Dr. Md. Minnatullah, Plant Pathology |
| Session Co-ordinator | Dr. Ravi Kant, TCA, Dholi and Dr. Ashish Kumar Panda, PGCA, RPCAU |
| 12.45-13.05 | Activation tagging to identify candidate genes for stress tolerance in crop plants <i>Dr. P.B. Kirti, Agri Biotech Foundation, Agricultural University Campus, Rajendranagar, Hyderabad</i> |
| 13.05-13.20 | Translational genomics for groundnut improvement <i>Dr. Manish Kumar Pandey, ICRISAT, Hydrabad</i> |
| 13.20-13.35 | Biotechnological Interventions for Conservation and Enhanced Medicinal value of Stevia plants vis-à-vis Implication of Signalling agents under drought stress <i>Dr. Padmanabh Dwivedi, Institute of Agricultural Sciences, BHU, Varanashi</i> |
| 13.35-13.55 | Magnifying the role of high energy inositol pyrophosphate in plants <i>Dr. Ajay K Pandey, AB&MB</i> |
| 13.55-14.05 | Discussion/Remarks (Chair /Co-Chair) |
| | Lunch Break |

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| 14.30-15.30 | Validictory session |
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