



2<sup>nd</sup> International Conference

**Advances and Innovations in Biotechnology for Sustainable Bioresources and Bioeconomy (AI-BSBB2023)**

22-25 November, 2023

Satna, (M.P.) 485001 INDIA



## AI-BSBB2023 SCIENTIFIC PROGRAM

<b>22<sup>nd</sup> November 2023</b>			
1100-1700	<b>REGISTRATION</b>		
1100-1700	<b>CONFERENCE WORKSHOPS (only for registered participants):</b>		
	<ol style="list-style-type: none"> <li><b>Scientific Writing</b>- by Eldon R Rene, IHE Delft Institute for Water Education, Netherlands</li> <li><b>Next Generation Sequencing Technologies</b> by Centyle Biotech, New Delhi, India</li> <li><b>Bioentrepreneurship</b>: How to be a Biotech based Entrepreneur- by Ankush Verma, Technology Business Incubator, CSIR-IIIM, Jammu, India</li> </ol>		
1700-1800	<b>Opening session</b>		
1800-1900	<b>Cultural program</b>		
1900-2000	<b>Dinner</b>		
<b>23<sup>rd</sup> November 2023</b>			
	<b>HALL-1 C-7, C Floor, A-Block, AKSU</b>	<b>Hall-2 C11, C Floor, A-Block, AKSU</b>	<b>HALL-3 Central Hall, C Floor, A-Block, AKSU</b>
0900-1030	<b>Session IA: Anaerobic Digestion and Biogas</b>	<b>Session IB: PIKNIKH Workshop/ Health &amp; Medical Biotechnology</b>	<b>Session IC: Food Production and Processing</b>
	<b>Chairs:</b> Byong-Hun Jeon, South Korea & V Vivekanand, India	<b>Chairs:</b> Renu Wadhwa, Japan & Sudheer K Singh, India	<b>Chairs:</b> Rui Oliveira, Portugal & BA Chopade, India
0900-0930	PL 1: Valorization of biogas fermentation residues, <b>Josef Marousek</b> , The Institute of Technology and Businesses in České Budějovice, Czech Republic	PL 2: Bioluminescence of marine crustacean from basic to engineering, <b>Yoshiro Ohmiya</b> , National Institute of Advanced Industrial Science and Technology, Japan	PL 3: Enzymatic debranching of starch and development of type 3 and type 5 resistant starch molecules, <b>Sudhir P Singh</b> , Center of Innovative and Applied Bioprocessing, Mohali, India
0930-0950	IL 1: Methanotrophic Activity in the Deep Environment: Enhancement of Methane Catalysis Rates, <b>Rajesh K Sani</b> , South Dakota School of Mines and Technology, USA	IL 2: Epigenetic Events as Robust Biosignatures and Potential Therapeutic Targets in Cervical Cancer, <b>K. Satyamoorthy</b> , Shri Dharmasthala Manjunatheshwara University, Dharwad, India	IL 3: Color assessment of intermittent microwave-dried <i>Raphanus Caudatus</i> using Adobe Photoshop and Genetic Algorithm, <b>Ranjna Sirohi</b> , University of Petroleum and Energy Studies, Dehradun, India

0950-1010	IL 4: A Novel, Single Cell-Based Approach for Deciphering Microbiome Dynamics in Anaerobic Digestion, <b>Abhishek Dhoble</b> , Indian Institute of Technology Varanasi, India	IL 5: Anti-stress Compounds of Ashwagandha: Evidence from Cell Culture Based Assays, <b>Sunil Kaul</b> , National Institute of Advanced Industrial Science and Technology, Japan	IL 6: Bioactive peptides in traditionally produced Himalayan cheese products: production and potential health benefits, <b>Amit Rai</b> , National Agri-Biotechnology Institute, Mohali, India
1010-1030	IL 7: Credentials of microflora in degradation of fluoride with reference to aquatic resources, <b>Ragini Gothwal</b> , Barkatullah University, Bhopal, India	IL 8: Host-derived targets for combating <i>Mycobacterium tuberculosis</i> infection, <b>Aravind Madhavan</b> , Amrita Vishwa Vidyapeetham University, Kollam, India	IL 9: Age and live weight prediction in pigs based on image extracted features and neural networks, <b>Ayon Tarafdar</b> , ICAR-Indian Veterinary Research Institute, Bareilly, India
<b>1030-1100</b>	<b>TEA/COFFEE</b>		
<b>1100-1300</b>	<b>Session IIA: Thermo-chemical Processing of Biomass</b>	<b>Session IIB: PIKNIKH Workshop/ Health &amp; Medical Biotechnology</b>	<b>Session IIC: Algal Biorefinery</b>
	<b>Chairs:</b> Manish Kumar Singh, India & Preeti Chaturvedi, India	<b>Chairs:</b> Yoshiro Ohmiya, Japan & Kamlesh Soni, India	<b>Chairs:</b> Helena Khatoon, Bangla Desh & Sindhu Raveendran, India
1100-1130	PL 4: Opportunities and challenges in thermo-catalytic conversion of biomass, <b>Thallada Bhaskar</b> , CSIR-Indian Institute of Petroleum, Dehradun, India	PL 5: Experimental Evidence of the Nutraceutical and Pharmaceutical Potential of Honey Bee Propolis, <b>Renu Wadhwa</b> , National Institute of Advanced Industrial Science and Technology, Japan	PL 6: Algal Chassis, the future of biomanufacturing, <b>Pavan Jutur</b> , International Centre for Genetic Engineering and Biotechnology, New Delhi, India
1130-1200	PL 7: Algal - lignocellulosic biomass biorefineries using hydrothermal processing, <b>Hector Ruiz</b> , Autonomous University of Coahuila, Mexico	PL 8: The Chronic Pain Epidemic: Are We Prepared for the Rising Tide?, <b>Amitesh Pathak</b> , Integral Medical University, Lucknow, India	PL 9: Artificial Intelligence based tools in cyanobacterial metabolites production-perspectives and applications, <b>Pratyosh Shukla</b> , Banaras Hindu University, Varanasi, India
1200-1220	IL10: <a href="#">Selective Hydrothermal Depolymerization of Biomass to Lactic acid and Small aromatics</a> , <b>Bhuvan B Mishra</b> , Center for Innovative and Applied Bioprocessing, Mohali, India	IL 11: To be, or not to be, the differential influence of the Wnt-DUB module on the cell-fate decision during embryonic stem cell differentiation, <b>Nibedita Lenka</b> , National Centre for Cell Sciences, Pune, India	IL 12: Impact of varying silica on growth and metabolite production in marine diatoms, <b>Archana Tiwari</b> , Amity University, Noida, India
1220-1240	IL 13: Co-gasification of biomass and petroleum coke: Recent advances and future directions,	IL 14: Link between hypoxia and neurodifferentiation signaling: experimental and	<a href="#">IL 15: Feasibility study of cost-effective nutrient media for microalgal growth within the aquaculture industry in a</a>

	<b>Ashish N. Sawarkar</b> , Motilal Nehru National Institute of Technology Prayagraj, India	computational perspectives, <b>Jaspreet Kaur Dhanjal</b> , Indraprastha Institute of Information Technology Delhi, India	circular economy context, <b>Gopalkrishnan Kumar</b> , University of Stavanger, Norway
<b>1240-1330</b>	<b>LUNCH</b>		
<b>1230-1430</b>	<b>POSTER SESSION (Corridor C-Floor)</b>		
<b>1330-1430</b>	<b>RAPID ORAL PRESENTATION-SESSION 1</b>	<b>RAPID ORAL PRESENTATION-SESSION 2</b>	<b>RAPID ORAL PRESENTATION-SESSION 3</b>
<b>1430-1530</b>	<b>Session IIIA: Sustainable Waste Management</b>	<b>Session IIIB: Plant &amp; Microbes Interaction and Crop Biotechnology</b>	<b>Session IIIC: Algal Biorefinery</b>
	<b>Chairs:</b> Josef Marousek, Czech Republic & Pratyooosh K Shukla, India	<b>Chairs:</b> Suresh K Dubey, India & Ayon Tarafdar, India	<b>Chairs:</b> Hector Ruiz, Mexico & Archana Tiwari, India
1430-1450	IL 16: Challenges of livestock and poultry manure treatment systems in China: from environmental quality, food safety and sustainable development, <b>ZQ Zhang</b> , Northwest A&F University, China	IL 17: Genomics and nano-enabled micronutrient bio fortification and abiotic stress management in rice plant, <b>Nand Kumar Singh</b> , Motilal Nehru National Institute of Technology Allahabad, Prayagraj, India	IL 18: Comprehensive characterization of microalgae isolated and screened from south-eastern freshwater habitat of Bangladesh, <b>Helena Khatoon</b> , Chattogram Veterinary and Animal Sciences University, Bangladesh
1450-1510	IL 19: Sustainable waste valorization technologies to moderate soil and water pollution, <b>Preeti Chaturvedi</b> , CSIR-Indian Institute of Toxicology Research, Lucknow, India	IL 20: Bacillus tropicus and Bacillus safensis: A potential siderophore producing rhizospheric bacteria its characterization and optimization, <b>Anita Tilwari</b> , Barkatullah University, Bhopal, India	IL 21: Modelling the growth of microalgae during wastewater treatment by machine learning, <b>Vishal Mishra</b> , Indian Institute of Technology (BHU), Varanasi, India
1510-1530	IL 22: Bio-Technological Approaches for Valorisation of Fruit Processing Waste in to valuable bioproducts, <b>Mukesh K Awasthi</b> , Northwest A&F University, Yangling, China	IL 23: Working with plant promoters: The story of AEG1, <b>Pradeep Kumar Burma</b> , University of Delhi, New Delhi, India	IL 24: Microbial Production of Biofuel and Biochemicals in a Biorefinery approach, <b>Sanjukta Subudhi</b> , The Energy and Resources Institute, New Delhi, India
<b>1530-1600</b>	<b>TEA/COFFEE</b>		

1600-1810	<b>Session IVA: Sustainable Environment</b>	<b>Session IVB: Sustainable Bioprocessing and Circular Economy</b>	<b>Session IVC: Biodegradation and Biofiltration/Workshop on Recent Advances in Microbial Biodegradation Technologies</b>
	<b>Chairs:</b> Rajesh K Sani, USA & Puneet S Chauhan, India	<b>Chairs:</b> Emm M Papamichael, Greece & Naveen Kangoo, India	<b>Chairs:</b> & José Luis Martínez Hernández, Mexico
1600-1630	PL 10: Fractionation of biocomponents can enhance the accessibility and efficient bioconversion of lignocellulose in anaerobic digestion by an acclimatized cellulolytic microbial consortium, <b>Byong-Hun Jeon</b> , Hanyang University, South Korea	PL 11: Bioprocess digitalization based on hybrid machine learning and physical mechanisms: examples from the biopharma industry, <b>Rui Oliveira</b> , Universidade Nova de Lisboa, Portugal	PL 12: Bacterial degradation of imidacloprid: Molecular and kinetic approach, <b>Suresh Kumar Dubey</b> , Banaras Hindu University, Varanasi, India
1630-1650	IL 25: Strategies to influence bioprocessing assisted morphological engineering of <i>Streptomyces</i> cell factories, <b>Kashyap K Dubey</b> , Jawaharlal Nehru University, New Delhi, India	IL 26: Microbial Biocatalysts Designed for Their Efficient Use and Re-Use in Bioprocesses of Industrial Importance, <b>Poonam Singh Nigam</b> , Ulster University, Northern Ireland, UK	IL 27: Biodegradation of Pyridine Raffinate: An Industry Effluent, <b>Manish Kumar Singh</b> , Dr. Ambedkar Institute of Technology for Handicapped, Kanpur, India
1650-1710	IL 28: Siloxanes in Biogas: Approaches of Sampling Procedure and GC-MS Method Determination, <b>Grzegorz Piechota</b> , GPCHEM, Laboratory of Biogas Research and Analysis, Poland	IL 29: Sustainable bioplastics production by utilizing lignocellulosic biomass resources: Recent updates and challenges, <b>Ganesh D Saratale</b> , Dongguk University, South Korea	IL 30: Performance of one- and two-liquid phase biotrickling filters for the simultaneous treatment of gaseous mixture of methanol, $\alpha$ -pinene, and hydrogen sulphide, <b>Eldon R Rene</b> , IHE Delft Institute for Water Education, Netherlands
1710-1730	IL 31: Electrochemically Modified Biochar Adsorbents for Enhanced Recovery of Phosphorus from Wastewater, <b>Bunushree Behera</b> , Thapar Institute of Engineering and Technology, Patiala, India	IL 32: Nanotechnology and plant growth promoting bacteria as sustainable and environment-friendly approach for enhancing crop productivity for next generation agriculture, <b>Ramakrishna Wusirika</b> , Central University of Punjab Bathinda, India	1710-1800 Hrs <b>Workshop: Recent Advances in Microbial Biodegradation Technologies</b> <b>Keynote Lecture 1:</b> DRDO Biodigester Technology: A New Paradigm for On-site (Non-sewered) Human Fecal Management, <b>A.K. Goel</b> , Defence R&D Establishment, Defence R&D Organisation, Gwalior, India
1730-1750	IL 34: Anaerobic Digestion for fecal waste management in the Himalayan region: A sustainable approach, <b>Manish Kumar</b> ,	IL 35: Exploration of <i>Serratia</i> sp. for the prodigiosin production, its extraction and purification studies, <b>Saurabh Saran</b> , CSIR-Indian Institute of Integrative Medicines, Jammu	1800-1850 Hrs <b>Keynote Lecture 2:</b> Bacteriophages in Biological Wastewater treatment, <b>Mukesh Kumar Meghvansi</b> ,

	University of Petroleum & Energy Studies, Dehradun, India		Defence R&D Establishment, Defence R&D Organisation, Gwalior, India
175-1810	IL 37: Pressmud – A potential source for CBG, <b>Mukund Bodhankar</b> , APT Research Foundation, Pune, India	IL 38: Design of an integrated hybrid technology for high titer ethanol production from lignocellulosic biomass and molasses, <b>Ajay Kumar Pandey</b> , CSJM University, Kanpur, India	1850-1910 Hrs <b>Keynote Lecture 3: Demonstration of Anaerobic Digestion Technology developed by DRDO, Mukesh Kumar Meghvansi</b> , Defence R&D Establishment, Defence R&D Organisation, Gwalior, India
<b>1900-2000</b>	<b>DINNER</b>		
<b>24<sup>th</sup> November 2023</b>			
<b>0900-1030</b>	<b>Session VA: Microbial Bioprocesses and Biorefineries</b>	<b>Session VB: Food &amp; Fermentation Bioprocesses</b>	<b>Session VC: Plant &amp; Agri Biotechnology</b>
	<b>Chairs:</b> Poonam Singh Nigam, UK & Jose Sandoval Cortes, Mexico	<b>Chairs:</b> Ganesh D Saratale, South Korea & Ashish N Sawarkar, India	<b>Chairs:</b> Sanjukta Subudhi, India & Nand Kumar Singh, India
0900-0930	PL 13: Modern biorefinery of biomass Vs petrorefinery, <b>Reeta Rani Singhania</b> , National Kaohsiung University for Science and Technology, Taiwan	PL 14: The impact of various immobilization protocols of proteases, in chitosan, on the clarification and quality of white wines, <b>Emm M Papamichael</b> , University of Ioannina, Greece	PL 15: SUMOylation: A new facet to plant immune responses, <b>Vivek Verma</b> , Central University of Rajasthan, India
0930-0950	IL 40: Advancements in valorization of food waste, <b>Sindhu Raveendran</b> , TKM Institute of Technology, Kollam, India	IL 41: Fungal fermentation as tool to transform the phenolic profile and bioactivities of agroindustrial waste: the case of coffee pulp, <b>Cristobal Aguilar</b> , Autonomous University of Coahuila, Mexico	IL 42: Functional genes towards increasing yield of indica rice varieties, <b>Kshirod K Jena</b> , Kalinga Institute of Technology, Bhubaneswar, India
0950-1010	IL 43: Utilization of xylose-enriched extract from spent lemongrass hydrolysate for clavulanic acid production using <i>Streptomyces clavuligerus</i>	IL 44: Combating phytopathogens using chitinolytic enzymes and chito-bioactives: an eco-competent sustainable solution, <b>Nidhi</b>	IL 45: Addressing the Antinutrient issues of Pearl millet using CRISPR-Cas9, <b>Vinay Kumar Yadav</b> , Central University of Punjab, Bhatinda, India

	(MTCC 1142), <b>Vinod Kumar</b> , CSIR – Indian Institute of Integrative, Jammu, India	<b>Pareek</b> , Central University of Rajasthan, Ajmer, India	
1010-1030	IL 46: Biomass to Bioenergy, <b>V Vivekanand</b> , Malaviya National Institute of Technology, Jaipur, India	IL 47: Metabolites produced by surface adhesion fermentation, <b>José Luis Martínez Hernández</b> , Autonomous University of Coahuila, Mexico	IL 48: Bio-prospection & Sustainable development of some prioritized medicinal plants species of north western Himalayas, <b>Phalisteen Sultan</b> , CSIR-Indian Institute of Integrative Medicines, Srinagar, India
<b>1030-1100</b>	<b>TEA/COFFEE</b>		
<b>1100-1140</b>	<b>Session VIA: Plant &amp; Agri Biotechnology</b>	<b>Session VIB: Microbial &amp; Food Biotechnology</b>	<b>Session VIC: Human Health &amp; Disease Control</b>
	<b>Chairs:</b> Cristobal Aguilar, Mexico & Ranjna Siirohi, India	<b>Chairs:</b> Thallada Bhaskar, India & Vinod Kumar, India	<b>Chairs:</b> Sunil Kaul, Japan & Aravind Madhavan, India
1100-1120	IL 49: Microbial Interventions to Enhance Plant and Soil Productivity, <b>Puneet Singh Chauhan</b> , CSIR-National Botanical Research Institute, Lucknow, India	IL 50: Artificial Intelligence and Machine Learning as powerful tools in bioprocesses optimization, <b>Jose Sandoval-Cortés</b> , Autonomous University of Coahuila, Mexico	IL 51: Mycobacterial biofilm formation and persistence: our understanding and efforts, <b>Sudheer Kumar Singh</b> , CSIR-Central Drug Research Institute, Lucknow, India
1120-1140	IL 52: Artificial Intelligence based future farming: a paradigm shift in agriculture sector, <b>Pradeep Kumar Shukla</b> , SHUATS, Prayagraj, India	IL 53: Generation of prebiotic oligosaccharides using fungal enzymes, <b>Naveen Kango</b> , Dr. Hari Singh Gour Central University, Sagar, India	<a href="#">IL 54: Non-calorie artificial sweeteners modulate gut microbiota and breach intestinal integrity</a> , <b>Prabhanshu Tripathi</b> , CSIR-Indian Institute of Toxicology Research, Lucknow, India
1140-1200	IL 55: Solid Lipid Nanoparticles Loaded with $\alpha$ -Terpineol for Enhanced Control of Fungal pathogens in Potato ( <i>Solanum tuberosum</i> L), <b>C.P. Upadhyay</b> , Dr. Hari Singh Gour Central University, Sagar, India	IL 56: Genotoxicomics of E-waste on Annelids – Scope to recover metals, <b>R. Jayakumar</b> , Kalinga University, Raipur, Chhattisgarh, India	IL 57: Low-cost innovations in predicting & preventing future disease susceptibility, <b>Pradyumna Kumar Mishra</b> , ICMR-National Institute for Research in Environmental Health, Bhopal, India
1200-1220	IL 58: Defence-related genes: Microbial regulated molecular switch in plants for sustainable agriculture and food security, <b>Shekhar Jain</b> , Mandsour University, Mandsour, India	IL 59: A novel N terminomics strategy to identify unknown substrates of serine Proteases, <b>Krishnan Hajela</b> , Devi Ahilya Vishwavidyalaya, Indore, India	IL 60: Hepatoprotective activities of <i>Vitis vinifera</i> L. fruits against induced toxicity by model toxicants, <b>Chandra Kant Sharma</b> , ITM University, Gwalior, India

1220-1240	IL 61: Nanotechnology's Impact on Secondary Metabolite Enhancement: Unveiling New Horizons, <b>Pragti Shukla</b> , SHUATS, Prayagraj, India	IL 62: Governance for Sustainability: To what extent are Indian Policies and Administrative Schemes Aligned with the cause of SDGs, Circularity and Resource Efficiency, <b>PC Abhilash</b> , Banaras Hindu University, Varanasi, India	IL 63: Innovative Approaches in Cancer Therapy, <b>Ashok Kumar</b> , AIIMS, Bhopal, India
1240-1300	IL 64: Elucidate the smart tailored nanoparticles enhances symbiotic fungus biomass and plant productivity, <b>Ram Prasad</b> , Mahatma Gandhi Central University, Motihari, India	IL 65: Nanotechnology-Based Approaches for Microbial Identification and Disease Detection in Plants, <b>Jitendra Malviya</b> , IES University, Bhopal, India	IL 66: Nano-Biotechnology: In vitro drug delivery system and early diagnosis of cancer, <b>Sandeep Kumar Verma</b> , SAGE University, Indore, India
<b>1100-1300</b>	<b>BRSI and Society of Life Sciences (SLS) Joint Felicitation Ceremony of International Senior Scientists</b>		
<b>1300-1400</b>	<b>AI-BSBB2023- CLOSING SESSION AND AWARD CEREMONY</b>		
<b>1400-1500</b>	<b>LUNCH</b>		
<b>1500-1730</b>	<b>Annual Session of Society of Life Sciences</b>		
<b><u>25<sup>th</sup> November 2023</u></b>			
<b>1000-1600</b>	<b>Annual Session of Society of Life Sciences - continues</b>		