Technological Innovations employing AI, Metabolic & Strain Engineering for Algal Bioprocesses (TechInAB-2026)

organized by

College of Horticulture, Durgapura (SKNAU, Jobner), Jaipur, Rajasthan & The Biotech Research Society of India (BRSI)

Venue: The Fern Hotel (Kundan Hall), Durgapura, Jaipur, Rajasthan, India

SCIENTIFIC PROGRAM

18 November 2026	
0930-1000	**Registration**
1000-1100	**Opening Session**
1100-1130	**TEA/COFFEE**
1130-1155	**PL 1: Microalgae-driven carbon sequestration and bio-fertilizer: Steps towards a sustainable future** Dr. Ismail Rawat *Institute for Water and Wastewater Technology, Durban University of Technology, South Africa*
1155-1220	**PL 2: Omics-guided metabolic rewiring under combinatorial carbon and nitrogen regimes governs carotenoid and lipid partitioning in algae** Dr. Pavan Jutur *International Centre for Genetic Engineering and Biotechnology, New Delhi, India*
1220-1240	**IL 1: Precision cultivation of microalgae using smart technologies** Dr. Olga Shishko *Immanuel Kant Baltic Federal University, Kaliningrad, Russia*
1240-1300	**IL 2: AI-driven strain engineering and intelligent microalgal bioprocesses: Shaping the future of sustainable biomanufacturing** Dr. Nidhi Pareek *Central University of Rajasthan, Ajmer, Rajasthan, India*
1300-1400	**LUNCH**
1400-1500	**POSTER PRESENTATIONS** **Session Coordinator:** Dr. Ayon Tarafdar, ICAR-IVRI, India & Dr. H. P. Parewa, College of Horticulture, Durgapura (SKNAU, Jobner), Jaipur, India
1500-1520	**IL 3: Machine learning prediction and process optimization for higher microalgal based extracellular polymeric substances (EPS) recovery and microplastic remediation** Dr. Bunushree Behera *Thapar Institute of Engineering and Technology, Punjab, India*
1520-1540	**IL 4: Real-time image based microalgal biomass prediction using machine learning** Dr. Ayon Tarafdar *ICAR-Indian Veterinary Research Institute, Izatnagar, Bareilly, India*

1540-1600	**IL 5: Microalgal strain improvement- pathway engineering** Dr. Vivek Gaur *Amity University, Noida, UP, India*
1600-1620	**TEA/COFFEE**
1620-1700	**ORAL PRESENTATIONS** **Session Chairs:** Dr. A. S. Baloda, College of Horticulture, Durgapura, Jaipur, India & Dr. Vivekanand, MNIT, Jaipur, India; **Session Coordinator:** Dr. Vivek Kumar Gaur, Amity University, Noida, India
1620-1630	**OP 1: Technology development for mass production of *Spirulina platensis* and its utilization as nutrient rich formulations: A case study of north east region of India** Dr. O. N. Tiwari *ICAR-Indian Agriculture Research Institute, New Delhi, India*
1630-1640	**OP 2: Valorizing microalgal biomass for sustainable protein recovery and enhanced nutritional value** Dr. Manpreet Kaur *Punjab Agricultural University, Ludhiana, Punjab, India*
1640-1650	**OP 3: Influence of different light spectra on growth and biochemical responses of diatoms** Dr. Rinku Kaushik *Amity University, Noida, India*
1650-1700	**OP 4: Green-synthesized magnetic nanoparticles from the marine diatom for magnetically assisted harvesting of microalgal biomass** Dr. Stanzen *Amity University, Noida, India*
<u>19 November 2026</u>	
1000-1025	**PL 3: Adaptive laboratory evolution: Sustainable strategies for enhanced metabolite production from microalgae** Prof. Archana Tiwari *Diatom Research Laboratory, Amity University, Noida, UP, India*
1025-1050	**PL 4: Microbial community structure in a biogas digester utilizing the marine energy crop *Saccharina latissima*** Dr. Vivekanand *MNIT, Jaipur, Rajasthan, India*
1050-1120	**TEA/COFFEE**
1120-1140	**IL 6: Harnessing marine algae for blue bioeconomy: bioproduct innovation and biorefinery strategies** Dr. Nitin Trivedi *Gujarat Biotechnology University, Gujarat, India*
1140-1200	**IL 7: Macroalgae as sustainable bio factories for high value functional biomolecules** Dr. Yogesh Kumar *SRM University, Haryana, India*
1200-1220	**IL 8: Innovative microalgae bioprocess for carbon capture and high-value carotenoid production: A sustainable solution to climate change mitigation** Dr. Reeta Rani Singhania *National Kaohsiung University of Science and Technology, Taiwan*

1220-1240	**IL 9: Hybrid biological-optoelctronic CO_2 conversion for sustainable carbon circularity** Prof. Sang Jun Sim *Korea University, Seoul, South Korea*
1240-1330	**LUNCH**
1330-1430	**POSTER PRESENTATIONS** **Session Coordinator:** Dr. Ayon Tarafdar, ICAR-IVRI, India & Dr. H. P. Parewa, College of Horticulture, Durgapura (SKNAU, Jobner), Jaipur, India
1430-1550	**ORAL PRESENTATIONS** **Session Chair:** Dr. L. N. Bairwa, College of Horticulture, Durgapura, Jaipur, India; Dr. Archana Tiwari, Amity University, Noida, India **Session Coordinator:** Dr. Bunushree Behera, TIET, Punjab, India
1430-1440	**OP 5: Nanochitin-enhanced microalgae-fungal pellets for the biosorption of synthetic dyes from industrial effluents** Dr. Pooja Choudhary *Central University of Rajasthan, Ajmer, Rajasthan, India*
1440-1450	**OP 6: Simultaneous wastewater treatment and electricity generation from microalgae cultivation** Dr. Pooja Sharma *Banasthali Vidyapeeth, Rajasthan, India*
1450-1500	**OP 7: Microalgal carbon capture: Evaluating the potential of mono and co-cultivation strategies for enhanced CO_2 sequestration** Dr. Bobita Ray *Central University of Rajasthan, Ajmer, Rajasthan, India*
1500-1510	**OP 8: Nanochitin-integrated fungal-microalgal pellets for enhanced dye removal from wastewater** Dr. Bhanwari Sepat *Central University of Rajasthan, Ajmer, Rajasthan, India*
1510-1520	**OP 9: Microalgae as multifunctional biological resources: Environmental remediation, bioenergy and agricultural applications** Dr. Jyoti Rawat *Mody University of Science and Technology, India*
1520-1530	**OP 10: Effect of macronutrient supplementation on the growth and protein accumulation of cyanobacteria** Dr. Shaubhik Anand *Central University of Rajasthan, India*
1530-1540	**OP 11: Diatom-based biorefinery for rice mill wastewater treatment and biomass valorization into high-value bioproducts** Dr. Deeksha Sharma *Gujarat Biotechnology University, India*
1540-1550	**OP 12: Integrated algal biorefinery for multiproduct valorization: Linking wastewater remediation, biofuel precursors and high-value metabolites** Dr. C. Nagendranath Reddy *Chaitanya Bharathi Institute of Technology, Telangana, India*
1550-1615	**TEA/COFFEE**
1615-1700	**Closing session**