## 7<sup>th</sup> International Conference of Indian Network for Soil Contamination Research (INSCR)

## "Modulating the Environment with Microbes"

| Day 1: 8 <sup>th</sup> November, 2022 (Tuesday) Inauguration [ROOM A] Guest of Honor: Prof. DS Rawat |   |  |
|--|---|--|
| IST (hrs)  | Event   |  |
| 1540-1545<br>1545-1550<br>1550-1555<br>1555-1600   | Welcome Address by the President: Rup Lal<br>Address by Guest of Honor: Prof. DS Rawat<br>Introduction to Participating Institutions<br>Abstract Book Release                               |  |
| 1600-1640  | Inaugural Lecture 1 Jan Roelof van der Meer (Professor, UNIL, Switzerland) "Culturing and managing complex soil microbiomes"  |  |
| 1645-1725  | Inaugural Lecture 2 Hauke Smidt (Professor, Wageningen University, Netherlands)  "Integrated biodiscovery-, bioreactor- and FAIR data facilities to unlock microbial diversity for society" |  |
| 1730-1800  | Cultural Event  |  |
| 1800-1805  | Concluding Remarks of Day 1   |  |

| Day 2: 9 <sup>h</sup> November, 2022 (Wednesday) |  |  |  |
|--|--|--|--|
|  | [ROOM A]   |  |  |
| IST (hrs)  | Event  |  |  |
| 0900-0940  | Inaugural Lecture 3 [ROOM A] Jizhong Zhou (Professor, University of Oklahoma, United States) "Microbial Functional Traits and Soil Carbon Fluxes"  |  |  |
| 0940-1020  | Plenary Lecture [ROOM A] Anil K Tripathi (Director and Professor, Institute of Science, Banaras Hindu University, Varanasi) "Role of alternative sigma factors in responding to abiotic environment in a plant growth promoting"         |  |  |
| 1020-1030  | Tea Break  |  |  |
| 1030-1400  | Session 1[ROOM A]  |  |  |
|  | Microbial Literacy: Science for Society  |  |  |
| 1030-1100  | Keynote Lecture Robert Metcalf (Emeritus Professor, California State University, USA)  "The Human Right to Safe Drinking Water Starts with Microbiology Testing at the Community Level"  |  |  |
| 1105-1135  | Keynote Lecture Rup Lal (INSA Senior Scientist, Acharya Narendra Dev College, University of Delhi)  "Microbial Literacy Mission under International Microbial Literacy Initiative in South Asia Center: Our Vision, Mission and Efforts" |  |  |
| 1140-1210  | Keynote Lecture Kenneth Timmis (University of Braunschweig, Germany) "Microbiology Literacy, Societal Wellbeing and Sustainability"  |  |  |
| 1215-1245  | Keynote Lecture Terry McGenity (Professor, University of Essex, United Kingdom) "Visualizing the invisible: class excursions to ignite children's enthusiasm for microbes"   |  |  |
| 1250-1310  | Shailly Anand (Assistant Professor, Deen Dayal Upadhyaya College, University of Delhi) "Small things, big challenges"  |  |  |
| 1315-1335  | Charu Dogra Rawat (Associate Professor, Ramjas College, University of Delhi) "Holistic microbiology literacy for building a better society"  |  |  |
| 1340-1400  | Paola Scavone (Principal Investigator, Instituto de Investigaciones Biologicas Clemente Estable, Uruguay) "The creation of comics for teaching microbiology to children"   |  |  |
| 1400-1415  | Sukanya Lal (Professor, Ramjas College, University of Delhi)  Concluding Remarks   |  |  |

| 1415-1445 | Lunch Break  |   |  |
|-----------|--|---|--|
|           | Session 2 (1445-1920) [ROOM A]   | Session 3 (1445-1920) [ROOM B]  |  |
|           | Microbial Interactions in Nature   | Industrial and Synthetic Microbiology   |  |
| 1445-1515 | Keynote Lecture S.K. Barik (Director and Professor, CSIR-NBRI, Lucknow) "Diversity of Microbial Interactions in Nature"  | Keynote Lecture Pramod W. Ramteke (Emeritus Professor, RTM Nagpur University, Nagpur) "Microbial Diversity in Sustainable Agriculture"  |  |
| 1520-1550 | Keynote Lecture Pinaki Sar (Professor, IIT Kharagpur, West Bengal) "Exploration of microbial life within the deep biosphere underneath the Deccan Traps"   | Keynote Lecture Anirban Roy Chaudhary (Senior Principal Scientist, CSIR-IMTECH, Chandigarh) "Process development and scale up for production of microbial exopolysaccharides: Petri plate to pilot plant" |  |
| 1555-1615 | Natesan Manickam (Chief Scientist, CSIR-Indian Institute of Toxicology Research)  "Biodegradation of multiple PAHs from waste water treatment plant soil-sludge samples by a microbial consortium" | Banwari Lal (Senior Director, Environmental and Industrial biotechnology, The Energy and Resources Institute, New Delhi)  "A Case study on Restoration of oil spills site in Kuwait oil field"            |  |
| 1620-1640 | Rekha Kumari (Associate Professor, Miranda House, DU) "Role of Gut Bacterial Bacteriocins to Combat Obesity By Regulating Lipogenesis In Host"   | Prashant Phale (Professor, IIT Bombay, Mumbai)  "Pseudomonas bharatica CSV86 T: An ideal host for in situ bioremediation and metabolic engineering"   |  |
| 1645-1705 | Mallikarjun Shakarad (Professor, University of Delhi, Delhi) "Evolution and importance of microbes in extreme environments"  | Pratyoosh Shukla (Professor, Banaras Hindu University, Varanasi) "Prospects of enhancing the production of cyanobacterial metabolites: futuristics strategies revisited"                                  |  |
| 1710-1730 | Rajeev Kaushik (Principal Scientist, ICAR-IARI, New Delhi) "Rhizosphere Dwelling Halophilic Archaea: Potential Role in Agriculture"  | Gunjan Pandey (Senior Research Scientist, CSIRO, Australia) "Enzymatic bioremediation of pesticides"  |  |
| 1735-1755 | <b>Dev Raj Joshi</b> (Associate Professor, Tribhuvan University, Nepal) "SARS CoV-2 in the environment: Sewage surveillance to predict community spread of COVID-19"                               | Kashyap K. Dubey (Associate Professor, JNU, New Delhi) "Microbes for mineralization of cancer drugs present in hospital wastewater"   |  |
| 1755-1805 | Tea Break  |   |  |
| 1810-1830 | Suresh Kumar Dubey (Professor, Department of Botany, BHU, Varanasi) "Evaluation of the bacterial potential for biodegradation of imidacloprid"   | Vishakha Raina (Professor, KIIT, Bhubaneswar) "Microbial Enzymes: Making Food Safe"   |  |
| 1835-1855 | Kosala Sirisena (Senior Lecturer, University of Columbo, Sri Lanka) "Insight into Hot Spring Microbiomes in Sri Lanka: Biodiversity and Biotechnological Prospects"                                | Namrata Misra (Assistant Professor, KIIT-TBI, Bhubaneswar) "Indian Biotech Innovation Landscape and Entrepreneurship Driving Soil Research"   |  |

| 1900-1920 | Radha Prasanna (Professor, ICAR-IARI, New Delhi)   | Satyanarayana Patel (Research Associate, Center of Innovative and Applied                          |  |  |
|-----------|--|--|--|--|
|           | "Agriculturally beneficial biofilms as climate-smart options for sustainable agriculture: from | Bioprocessing (CIAB)   |  |  |
|           | lab to land"   | "Novel D-allulose 3-epimerase variants for production of the functional sugar of anti-diabetic and |  |  |
|           |  | anti-obesity potential, D-allulose"  |  |  |
| 1920-1940 | Janmejay Pandey (Assistant Professor, CUH, Rajasthan)  | Roshan Kumar (Assistant Professor, PG Department of Zoology, Magadh                                |  |  |
|           | "Implementation of drought tolerance enhancing plant growth promoting rhizobacteria for        | University)  |  |  |
|           | sustainable agriculture in arid agroecosystems: Challenges and Technological Interventions"    | "Monkey Pox Virus (MPXV): Phylogenomics, Host-Pathogen Interactome, and Mutational Cascade"        |  |  |
|           |  |  |  |  |
|           | CLOSING OF THE DAY   |  |  |  |

## Day 3: 10<sup>th</sup> November, 2022 (Thursday) IST **Event** Plenary Lecture [ROOM A] 0900-0940 Craig Cary (Professor, Department of Biological Sciences, The University of Waikato, New Zealand.) Session 5 (0945-1240) [Room B] Session 4 (0945-1240) [ROOM A] Microbiology in the last 75 years in India Extremophiles Keynote Lecture Keynote Lecture 0945-1015 Sanjay Kumar (Director, CSIR-IHBT, Palampur) V. C. Kalia (Professor, Konkuk University, South Korea) "Bioprospecting Microbes from Himalayan Niches for the Benefit of the Society" "Bacteria as AntiCancer Agents" 1020-1050 Keynote Lecture Keynote Lecture Dharam Singh (Senior Principal Scientist, CSIR-IHBT, Palampur) Swaranjit Singh (Director, SAS Free Polyclinic, Punjab) "Biodegradable Bioplastic from Bacteria of Himalayan Niches: A Greener Solution" 1055-1115 Rakshak Kumar (Scientist, CSIR-IHBT, Palampur) Jyoti Prakash Tamang (Professor, Sikkim University, Sikkim) "Human Fecal Waste-The Himalayan way of on-site sanitation and resource recovery" "Domestication of some beneficial microbes for food fermentation" 1115-1130 Tea Break 1130-1150 Asha Chaubey (Senior Principal Scientist, CSIR-IIIM, Jammu) Alok Prasad Das (Assistant Professor, Rama Devi Women's University, Orissa) "Fermentation based green processes for biopharmaceuticals: Need of hour for sustainable "Microorganisms in Emerging Marine Waste Management" future"

| 1155-1215 | Anil Kant Thakur (Associate Professor, Jaypee University, Solan)   | Krishnendu Mondal (Scientist C, Ministry of Environment, Forests & Climate  |  |  |
|-----------|--|---|--|--|
|           | "Spray induced RNAi: A promising approach towards Plant disease and Pest   | Change, Government of India)  |  |  |
|           | management"  | "Environmental Pollution and Remedies"  |  |  |
| 1220-1240 | Vibha Tondon (Professor, JNU, New Delhi)   | Madhu Choudhary (Scientist, ICAR-CSSRI, Karnal)   |  |  |
|           | "Unique gate dynamics of topo IA in the presence of PPEF which combats WHO listed priority pathogens to DNA Topology in genomic transactions"  | "Climate smart farming and their effects on microbial properties under major agri-food systems of Indo-Gangetic Plains"   |  |  |
| 1240-1320 | INSCR GB Meeting   |   |  |  |
| 1320-1400 | Lunch Break  |   |  |  |
| 1400-1440 | Plenary Lecture [ROOM A] Juan Luis Ramos (Professor, University of Geneva, Switzerland) "The double life style of Pseudomonas putida: A useful chassis for rhizoremediation and production of added-value chemicals"                                   |   |  |  |
|           | Session 6 (1445-1815) [ROOM A]   | Session 7 (1445-1815) [ROOM B]  |  |  |
|           | Microbial Diversity  | Applied Microbiology and Sustainable Agriculture  |  |  |
| 1445-1515 | Keynote Lecture Jöerg Overmann (Professor, DSMZ, Germany) "Functions and future applications of soil microbial diversity"  | Keynote Lecture Gerrard Eddy Jai Poinern (Senior Lecturer, Murdoch University, Western Australia) "Innovative Hydrochar Biowaste Material amendments in Agricultural Soils and its impact on N 2 O Green House Gas" |  |  |
| 1520-1540 | Suresh Korpole (Principal Scientist, CSIR-IMTECH, Chandigarh) "Role of a microbial resource centre (MTCC) in conservation and exploitation of microbial diversity"   | Praveen Rishi (Professor, Panjab University, Patiala)   |  |  |
| 1545-1605 | Gaurav Sharma (DST-INSPIRE Faculty Scientist, Institute of Bioinformatics and Applied Biotechnology (IBAB), Bengaluru) "Understanding the sensory mechanisms in Myxobacteria"  | Sunil Pabbi (Principal Scientist, ICAR-IARI, New Delhi) "Microbial formulations for sustaining crop productivity, soil health and environment."   |  |  |
| 1610-1630 | P. Anil Kumar (Principal Scientist, CSIR-IMTECH, Chandigarh) "Yeast biosurfactants with potential antimicrobial properties"  | Sanjukta Subudhi (Area Convener, Microbial Biofuels and Biochemicals, The Energy and Resources Institute, New Delhi)  "Moving towards Biorefineries: Integrated production of Biofuels and Bio-commodities"         |  |  |
| 1635-1655 | Om Prakash (Symbiosis Center for Climate Change and Sustainability, Symbiosis International University, Pune) "Two-Dimensional Cell Separation: a High-Throughput Approach to Enhance the Culturability of Bacterial Cells from Environmental Samples" | Mansi Verma (Assistant Professor, Hansraj College, University of Delhi) "Comparative 'omics' of Dengue Virus"   |  |  |
| 1700-1720 | Punyasloke Bhadury (Professor, IISER, Kolkata)  "Microbial biocomplexity in coastal Bay of Bengal-molecular perspectives on biogeochemical cycling"  | Minakshi Grover (Principal Scientist, ICAR-IARI, New Delhi) "Microorganisms as tool to mitigate abiotic stress in plants"   |  |  |
| 1725-1745 | Jasvinder Kaur (Assistant Professor, Gargi College, DU)  "Phylogenomics based reclassification in the genus Psychrobacter"   | P.C. Abhilash (Assistant Professor, IESD-BHU, Varanasi)   |  |  |

|           |   | "Crop diversification as a sustainable strategy for food security and improving soil microbial diversity"                        |  |
|-----------|---|--|--|
| 1755-1815 | Amit Kumar Rai (Scientist C, Institute of Bioresources and Sustainable Development)  "Microbial biotransformation during protein rich food production and production of bioactive peptides" | L.P. Singha (NPDF, School of Biotechnology, BHU)  "Rhizosphere Microbiome Engineering for Bioremediation of Emerging Pollutants" |  |
| 1820-1835 | Tea Break 🕏   |  |  |
| 1840-1920 | Plenary Lecture [ROOM A]  Hans H. Richnow (Ex-Professor, Helmholtz-Centre for Environmental Research, Germany)  "HCH and degradation in plant, trees and rhizosphere"                       |  |  |
| 1930-2010 | Plenary Lecture [ROOM A] William B. Whitman (Emeritus Professor, University of Georgia, Athens) "Why we need the SeqCode: a code of nomenclature based on genome sequences"                 |  |  |

|           | Day 4: 11th November, 2022 (Friday)  |   |  |   |  |
|-----------|--|---|--|---|--|
| IST (hrs) | Event  |   |  |   |  |
|           | Session 8 (0900-1350) [ROOM A]  Microbial Pathogenesis and Disease  Session 9 (0900-1310) [ROOM B and ROOM C]  Research at UG/PG Level   |   |  |   |  |
|           |  |   |  |   |  |
|           | Dynamics   | Faculty Oral Talks [ROOM B] Student Oral Talks [ROO |  |   |  |
| 0900-0930 | Keynote Lecture Bechan Sharma (Professor, Department of Biochemistry, University of Allahabad) "On the molecular interplay between HIV-1 and host cells, viral pathogenesis and drug resistance" | 0900-0910   | Rachna Joshi (Towards development of Hydrogen fuel: For clean and safe environment: Study of properties of Hydrogen atom under pressure) | Sonam Antil (Crude N-butyl alcohol extract of<br>Bacillus megaterium strain KMT-8 fermentation<br>supernatant exhibits antagonistic activity against<br>Meloidogyne javanica)           |  |
|           |  | 0910-0920   | Shallu Sachdeva (Women in Science – Past and Present)  | Aishwary Kumar Chaturvedi (Microbes as natural crusader for pollutants in Air)  |  |
|           |  | 0920-0930   | Monica Misra (Role of Indian Women in Science)   | Manjistha Baruah (Incidence of human<br>Extraintestinal pathogenic Escherichia coli (ExPEC)<br>ST131 fimH30 and H30Rx subclones in multidrug-<br>resistant E. coli of bovine infection) |  |
| 0935-0955 | Arun Sidram Kharat (Professor, JNU, New Delhi) "Oxacillinases and virulence in Gram negative pathogens"  | 0930-0940   | Rajni Gupta (Microbes and their role in Soil Health)   | Nabeela Farhat (Broad spectrum inhibitors against class A, B, C type β-lactamases to block the hydrolysis against antibiotics: Kinetics and structural characterization)                |  |

|           |  | 0940-0950 | Parminder Kaur (Insight into the role of carotenoid synthesis in Chlamydomonas reinhardtii-A case study)                        | Subhransu Sekhar Behera (Genome wide exploration of chitinolytic Streptomyces sp. strain RB7AG, its production potential of chitosan and its application)                             |
|-----------|--|-----------|---|---|
|           |  | 0950-1000 | Vijya Laxmi (MEOR: A beneficial microbial interaction for oil recovery)   | Priyadarshini Pratikshya Nayak (Unveiling the insights of finger millet (Eleusine coracana) via malting and fermentation assisting degradation of pesticides)                         |
| 1000-1020 | Indrakant K Singh (Associate Professor, Deshbandhu College, DU)  "Reconstructing gut microbiota: A forthcoming era of colorectal cancer the explantice"                                    | 1000-1010 | Tripti Negi (Microbial Interactions: A Novel<br>Way To Find Biomolecules For Biotechnological<br>Applications)                  | Vridhi Singh (Mushroom Cultivation: A Non-<br>Conventional Approach To Convert College Generated<br>Lignocellulosic Waste Into Environmentally<br>Sustainable Products)               |
|           | therapeutics"  | 1010-1020 | Rashmi Sharma (What Do We Owe to the Scientists?)   | Satender kumar (Soil health: a macro and micronutrient perspective)   |
| 1025-1045 | Junaid Jibran Jawed (Assistant Professor, Presidency University, Kolkata)  "Combating protozoan infection with immune cells – A novel  | 1020-1030 | Rama Sisodia (What Do We Owe to the Scientists?)  | Harsha (Evaluation of Bioactive compounds from<br>Streptomyces spp. As an antifungal agent against<br>diverse pathogenic fungi)   |
|           | strategy to overcome drug resistance"  | 1030-1040 | Indranil Chattopadhyay (Salivary bacteria<br>profile may unravel the impact in head and neck<br>cancer and lung adenocarcinoma) | Haritha Prasad (Massive outbreak of bioluminescent tides of heterotrophic dinoflagellate Noctiluca scintillans (Myzozoa: Dinophyceae) along the south-west coast of India)            |
|           |  | 1040-1050 | Prajwalit Shikha (Women in STEM: Impact of Gender Stereotypes)  | Sruthi S. Kumar (Air Pollution Tolerance Index (APTI) – a tool to measure pollution)  |
| 1050-1110 | Baljeet Kaur (Associate Professor, Hansraj College, DU) "A novel binary k-mer approach for classification of coding and noncoding RNAs across diverse species"                             | 1050-1100 | Neeraja Sood (HPV V accine- The crusader against cervical cancer)   | Gauri Ghai (A Novel Architecture of Ultra-Thin<br>Body Silicon On Insulator (UTB SOI) MOSFET for<br>Biomolecular Sensing Application)   |
|           |  | 1100-1110 | -   | Shamashree Samanta (Biowaste to Personal Protective Equipment (PPEs))   |
| 1115-1135 | Vikas Sood (Assistant Professor, Jamia Hamdard) "Novel insights into host responses to Japanese Encephalitis Virus infection: Reanalysis of public transcriptome and microRNAome datasets" | 1110-1120 | -   | Shruti Sinha (Development of miniaturized agar based assays in 96-well microplates applicable to high-throughput screening of industrially valuable microorganisms)                   |
|           | umastis  | 1120-1130 | -   | Sailee Sanjay Asolkar (Strategies for improvement in 2,3 Butanediol production in Bacillus subtilis)  |
| 1135-1145 | Tea Break  |           |   |   |
| 1150-1230 | Plenary Talk Anil Koul (Vice-President, Global Health Discovery and Partnerships, Johnson & Johnson, Belgium) "Global Challenges of AMR"   | 1150-1200 | -   | Neetu Yadav (Ganga river water quality assessment using combined approaches: Physico-chemical parameters and bacterial isolation with special reference to bioremediation of Lindane) |
|           | Guova Chavenges of 2 livil   | 1200-1210 | -   | Aditi Singh (Soil bacteria isolated from the metsulfuron methyl herbicide contaminated agricultural land to clean the environment)  |
|           |  | 1210-1220 | -   | Manisha Behera (Incidence of human Extraintestinal pathogenic Escherichia coli (ExPEC) ST131 fimH30 and H30Rx subclones in multidrug- resistant E. coli of bovine infection)          |

|           |   | 1220-1230 | <u>Sumit Vashista</u> (Bluetooth Beacons: Location based Geofence for crowd management)  |
|-----------|---|-----------|--|
| 1235-1255 | Bertasi Barbara (Istituto Zooprofilattico Sperimentale della Lombardia ed Emilia, Italy) (8:05AM) "SARS-CoV2 monitoring in waste water: the Italian experience"   | 1230-1240 | Absar Talat (Detection of E. coli IncX1 Plasmid-<br>Mediated mcr-5.1 Gene in an Indian Hospital Sewage<br>Water Using Shotgun Metagenomic Sequencing: A<br>First Report) |
|           |   | 1240-1250 | Mayouri Das (Screening Of PGA producing Bacillus from bemerthu)  |
| 1255-1315 | Pooja Arora (Assistant Professor, Hansraj College,<br>University of Delhi)<br>"Time Series Analysis of SARS-CoV-2 Genomes and Correlations<br>among Highly Prevalent Mutations"   | 1250-1300 | Sonam Lama (Probiotic screening of yeasts from dahi)   |
|           |   | 1300-1310 | Manisha Gurnani (Cyano-compounds as inhihitors of essential divisome proteins in human pathogenic bacteria)  |
| 1315-1335 | Helianthous (Assistant Professor, Ramjas College, University "Understanding the potential drug targets in Mycobacterium tuberculos  |           | ,  |
| 1335-1355 | Nirjara Singhvi (Assistant Professor, Dev Bhoomi Uttarakhand University) "Omics approach to understand the Regulation and Expression of Secondary Metabolite Production in Actinobacteria"  |           |  |
| 1355-1415 | Sinosh Skariyachan (Assistant Professor, St. Pius X College, Kerala)  "Computational modelling and virtual screening decipher that response regulator GACA and transcriptional activator RHLR proteins of biofilm associated Pseudomonas aeruginosa are prospective molecular targets for natural lead molecules" |           |  |
| 1415-1500 | Lunch Break ■   |           |  |
| 1500-1730 | Session 10 [ROOM A] Women in Science  |           |  |
| 1505-1535 | Keynote Lecture Pratibha Jolly (Principal, Miranda House, DU) "Advancing Gender Equity for Women in Science"  |           |  |
| 1540-1600 | Agnieszka Dybala-Defratyka (Associate Professor, Lodz University of Technology, Poland) "The Application of Molecular Modeling Tools in the Study of Environmental Processes"   |           |  |
| 1605-1625 | Tista Prasai Joshi (Scientist, Nepal Academy of Science and Technology, Kathmandu) "Women in Science: Status and Challenges in Nepal"   |           |  |
| 1630-1650 | Atya Kapley (Senior Principal Scientist, CSIR-NEERI, Nagpur) "Antibiotic resistance and wastewater management"  |           |  |
| 1655-1715 | Corinne Maurice (Assistant Professor, McGill University, Canada) "Using bacteriophages to modulate the gut microbiome"  |           |  |

| 1720-1740                           | Kalai Mathee (Professor, Florida International University, USA)               |  |
|-------------------------------------|---|--|
| 1800-1840                           | Valedictory Ceremony [Room A] Chief Guest: Prof. R. C. Sobti                  |  |
| 1800-1810                           | Chief Guest Address: Prof. R. C. Sobti  |  |
| 1810-1815                           | Competition Winners Announcement  |  |
| 1815-1820<br>1820-1825<br>1825-1830 | INSCR Second Issue Release FEMS Special Issue Announcement Concluding Remarks |  |
| 1830-1840                           | Vote of Thanks  |  |