

DAY 2 SESSION – IV
10:00 a.m -11:00 a.m.

HALL 4 (SEATING CAPACITY 171)

Theme: Modernizing Homoeopathy: Bridging Traditional Principles and Scientific Innovation in

Emerging Health Issues and Drug Resistance

This session seeks to explore the integration of foundational homoeopathic philosophy with emerging scientific advancements to address contemporary health challenges, notably antimicrobial resistance (AMR), cancer, and neurodegenerative diseases. It will present insights into the mechanisms of action of homoeopathic medicines derived from preclinical and *in vitro* investigations, extending to advanced models such as 3D organoid systems. In parallel, the role of homoeopathy in addressing AMR will be critically examined, particularly its potential to reduce unnecessary antibiotic usage and contribute to sustainable and integrative treatment strategies. The session will also highlight the need for systematic investigation of homoeopathic medicines prepared from diverse sources, with special emphasis on *imponderabilia* such as X-ray, electricity, and magnetism, where standardization remains an evolving scientific domain. Emphasis will be placed on employing advanced analytical techniques, including FTIR, spectroscopy, and high-resolution microscopy (AFM, SEM, TEM), to decode structural and physicochemical transformations induced during potentization. A key focus will be on nanodomain research, examining the presence, characteristics, and functional relevance of nanoparticles, thereby providing a measurable scientific interface to traditional homoeopathic concepts.

Overall, the session will offer a comprehensive perspective on how the integration of nanoscience, molecular analytics, and evidence-based research can enhance the scientific credibility of homoeopathy and expand its role in addressing pressing global health challenges.

Convener: Dr Ritika Hassija Narula, RO (H) /S-2

Co-Convener: Dr.Binit Dwivedi,

RO(Chemistry)/S-4

Panelists

1. Prof. Ajoy Kumar Ray, Director, JIS Institute of Advanced Studies & Research, JIS University, Kolkata

Prof. Ray, recipient of Padmashree, is the Director, JIS Institute of Advanced Studies & Research, JIS University, Kolkata. He is former Professor and Head School of Medical Science and Technology. He also served as Former Director of Indian Institute of Engineering Science and Technology.

2. Dr. Ramesh Bhonde, Emeritus Scientist, Dr D.Y. Patil Vidyapeeth (DPU), Pimpri Pune

Emeritus Scientist and Former Director (Research) at DPU, Pune. Dr. Bhonde has 40 years of expertise in pancreatic regeneration and stem cell research. A former Dean at the School of Regenerative Medicine, he has published over 300 Scopus-indexed papers (h-index: 60) and mentored 25 Ph.D. scholars. He is a recipient of the Golden Bridge Award for translational research and the Bharat Gaurav Rashtriya Purskar.

3. Prof. (Dr.) Alok Chandra Bharti, Professor and Chair, Molecular Oncology Laboratory, Dept. of Zoology, University of Delhi (North Campus)

Prof. Bharti is actively engaged in investigating transcriptional regulation of carcinogenesis for last 28 years. Major area of his research includes development of anti-cancer, and anti-HPV therapeutics with an emphasis on Homeopathy, Circulating tumor cells, single cell genomics, HPV diagnostics, Stem cell biology, Telomerase biology. He is currently involved in development of new and cost-effective diagnostics for the control and management of HPV infection-associated cancers. He also served as advisor to WHO and coordinated WHO's HPV Regional Reference Laboratory for South East Asia. Dr. Bharti is a recipient of INSA Medal for Young Scientist (2009) and ICMR's and INSA's International Senior Research Fellowships for Senior Scientists (2012; 2018).

4. Prof. Rakesh Kumar Sharma, Department of Chemistry, University of Delhi

Professor in the Department of Chemistry at the University of Delhi, specializing in the preparation and application of metal, polymeric, and magnetic nanoparticles. He earned his Ph.D. and M.Phil. from the University of Delhi, following an M.Sc. from Jamia Millia Islamia.

5. Dr. V. N. Azger Dusthacker, Scientist-E and ICMR International fellow, Deptt. of Bacteriology, ICMR-NIRT, Chennai

Scientist 'E' and ICMR International Fellow at ICMR-NIRT, Chennai, Dr. Dusthacker specializes in mycobacteriology, drug discovery, and mycobacteriophage-based interventions. He has held fellowships at Albert Einstein College of Medicine and Loughborough University and received the Dr. C. Srinivasa Rao Award. With 64 publications and five patents, he leads multiple ongoing diagnostic and therapeutic studies.

6. Prof. Dhiraj Devidas Bhatia, Associate Professor, Department of Biological Sciences& Engineering, IIT Gandhinagar

Associate Professor at IIT Gandhinagar and member of INYAS-INSA, Prof. Bhatia specializes in DNA nanotechnology and its translational biomedical applications. Following a PhD from NCBS-TIFR and fellowships at the Curie Institute, Paris, he now leads a lab focused on programming biological systems. He also serves as Program Director for ANRF-PAIR Gujarat and scientific advisor for Q-Nano-Sol.

7. Dr. Chandra Sekhar Tiwari, Associate Professor, Deptt. of Metallurgical& Materials Engineering, IIT, Kharagpur

Associate Professor in the Department of Metallurgical and Materials Engineering at IIT Kharagpur and a former research scientist at Rice University. He earned his PhD from IISc Bangalore and specializes in sustainable materials, 2D materials, and additive manufacturing. With over 500 international publications (h-index: 67), 20 patents, and three technology transfers, he is a highly cited researcher in materials science. His work has been recognized with numerous prestigious honors, including the INSA Young Scientist Award, the Ramanujan Fellowship, and the MRSI Medal.

8. Dr. Ashwini Chauhan, Associate Professor, Dept. of Microbiology, University of Delhi, South Campus

Associate Professor of Microbiology at the University of Delhi, Dr. Chauhan is an internationally trained scientist with over two decades of experience at institutions like Institute Pasteur and UT Health Science Center. A leading expert in biofilm biology and anti-biofilm strategies, his research focuses on microbial virulence and persister biology. His work is extensively published in high-impact journals, including Nature Protocols and mBio.

Rapporteurs: Dr. Anamika Kumari Anuja, RA(Biotech), Dr. Archana Nagar, SRF(H)