



AMITY UNIVERSITY

MADHYA PRADESH

(Established by Ritnand Balved Education Foundation)

Amity Institute of Biotechnology

2nd International Conference

Recent Advances In Biotechnology and Nanobiotechnology (Int-BIONANO-2020)

10 - 11 February 2022

Amity Institute of Biotechnology, Amity University, Gwalior organized two days '2nd International Conference on Recent Advances In Biotechnology and Nanobiotechnology (Int-BIONANO-2020) on online platform. On the first day, conference was inaugurated online by lamp lighting ceremony followed by Saraswati vandana in the presence of chief guest Prof. (Dr.) C.P. Joshi, Professor and Chair, Department of Biological Science, Michigan Technological University, USA, guest of honor addressed by Prof. (Dr.) Jurg Ott Professor Emeritus and Head of Lab, Rockefeller University New York, USA along with Hon'ble Vice Chancellor Lt. Gen. V. K. Sharma, AVSM (Retd.), Pro-Vice Chancellor AUMP, Prof. (Dr.) M.P. Kaushik, Prof. (Dr.) R.S. Tomar (Convener of the International conference) and other dignitaries.

The inaugural session started with the welcome address by Hon'ble Vice Chancellor Lt. Gen. V. K. Sharma, AVSM (Retd.). The abstract book of the 2nd International conference was released by dignitaries, followed by keynote address by the chief guest Prof. (Dr.) C.P. Joshi, Professor and Chair, Department of Biological Science, Michigan Technological University, USA on the topic 'Plant cell wall biotechnology for improving bioenergy production'.

On the first day, there were three technical sessions on different themes of the conference and fifteen speakers from reputed International and national academic institutes delivered their talks. This includes one keynote address, 14 invited talks.

Researchers from ICAR-NBAIM Mau, Prathyusha Engineering College, Thiruvallur, GLA University Mathura, Indian Statistical Institute, Kolkata RKDF University, Bhopal, Bundelkhand University Jhansi, Jiwaji University, Gwalior, Rajmate Vijayaraje Krishi VishwaVidyalaya, Govt. KRG PG Autonomous College, Gwalior, CIMAP, Lucknow, IISER, Bhopal, G.R. Medical college, Gwalior, Govt. SMS Model Science College, Shri Krishna University, Chhatarpur, Tropolite food Pvt. Ltd., Gwalior, CSIR-NBRI, Lucknow, ITM University, VISM, Govt. Girls College, VIT University Bhopal, Bharathidasan University, Tamil Nadu and Tropical Forest Research Institute, Jabalpur participated in the conference.

After inaugural session, first Technical session of the conference on 'Molecular Biology and Plant Biotechnology' started with the invited talk of Prof. (Dr.) Rajendra Prasad, Amity Institute of Biotechnology, Amity University Haryana on the topic '*ONE GENE, ONE PROTEIN AND ONE LIFE*'. The session was chaired by Prof.(Dr.) R.S. Tomar and co-chaired by Prof. (Dr.) Rajendra Prasad. The second invited lecture in this session was delivered by Dr. Manoj Prasad, National Institute of Plant Genome Research, Aruna Asaf Ali Marg, New Delhi on the topic 'Sw5a: The Trojan Horse against ToLCNDV infection in tomato' followed by next invited talk by Dr. Shailendra Goel, Department of Botany, University of Delhi, on the topic '*An integrated approach using genomics and breeding for a traditional Indian oil seed crop: Safflower*' and Dr. Vikas Jain, Microbiology and Molecular Biology Laboratory, Department of Biological Sciences, Indian Institute of Science Education and Research Bhopal on the topic 'Deciphering the physiological relevance and molecular properties of Mycobacteriophage D29 Holin'.

After lunch break, second technical session on 'Nanotechnology and Biosensor' started which was chaired by Dr. Rajiv Prakash, School of Materials Science and Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi and co-chaired by Dr. Vassilis Fotopoulos Department of Agricultural Sciences, Biotechnology & Food Science, Cyprus University of Technology, Lemesos, Cyprus. Dr. Rajiv Prakash delivered an invited talk on the topic 'New generation bio-sensors based on nano materials functionalised transducers'. Afterwards, another invited talk was delivered by **Dr. Vassilis Fotopoulos** on the topic 'Potential use of nanomaterials towards a sustainable agriculture' followed by a talk by Prof. (Dr.) V.P. Sharma CSIR-Indian Institute of Toxicology Research, Lucknow on the topic 'Toxicology: Recent Advances and Strategies for Sustainability & Regulatory Aspects'. In this continuation another invited talk was delivered by Prof. (Dr.) Aparna Khanna Amity Institute of Biotechnology, Amity University Mumbai on the topic Design of Novel Nanomaterials for efficient Stem Cell Tracking followed by Dr. Seema Nara, Department of Biotechnology, Motilal Nehru National Institute of Technology Allahabad, Uttar Pradesh, India on the Topic: Aptamer as detection agents in *in-vitro* diagnostics. The last invited talk of this session was delivered by Dr. Shivendu Ranjan Department of Biotechnology, CSJM University, Kanpur, Uttar Pradesh on the topic 'Electrospinning and Electrospraying for Active compound Encapsulation'. Session was ended with the panel discussion between resource persons and participants.

Afterwards another technical session on Applied Biotechnology was started which was chaired by Prof. (Dr.) Rajesh Tiwari, Amity University Lucknow and co-chaired by Dr. Alok Patel Biochemical Process Engineering, Division of Chemical, Engineering, Department of Civil, Environmental and Natural Resources Engineering, Luleå University of Technology, Sweden. Prof. (Dr.) Rajesh Tiwari delivered an invited talk on the topic 'Harnessing Science, Technology and Innovation for societal Benefits'. After

this lecture, Dr. Alok Patel delivered a lecture on the topic 'Bioprocessing of volatile fatty acids as building blocks for lipogenesis in oleagenic microbes for the production of nutraceuticals (DHA and Squalene) to reduce dependency on animal sources' followed by another invited lecture by Dr. Jyoti Priyadarshini, Gajra Raja Medical College, Gwalior on the topic 'Applications of Nanotechnology in Health Care'. The technical session of first day was ended with the invited talk delivered by Dr. Sonia Johri, Department of Life Sciences, ITM University, Gwalior on the topic 'Therapeutic approach of Watermelon (*Citrullus lanatus*) rind: Biosynthesis and Characterization of selenium nanoparticles

On day -1 there were total 5 parallel session for the oral presentations of participants from India and abroad. Parallel sessions were conducted online on google meet platform with distinguished scientists and researchers as chairperson and co-chairperson in different sessions in which total 105 presentations were conducted.

Day 2

On second day of international conference, Technical session-4 of the conference on 'Omics' started with the invited talk of Prof. (Dr.) Raghuvir Singh Tomar, Department of Biological Sciences, Indian Institute of Science Education and Research Bhopal on the topic 'Dissecting the role of epigenetics in regulation of cellular homeostatic pathways under stress conditions'. The session was chaired by Prof. (Dr.) Raghuvir Singh Tomar and co-chaired by Dr. Gitanjali Yadav, Computational Biology Laboratory, National Institute of Plant Genome Research (NIPGR), New Delhi. The second invited lecture in this session was delivered by Dr. Gitanjali Yadav on the topic 'Spatio-Temporal Gene Regulatory Networks of Algal Biophysical CCM For Food Security' followed by invited talk of Dr. Sameer Srivastava, Department of Biotechnology, Motilal Nehru National Institute of Technology Allahabad, Uttar Pradesh on the topic 'Transcriptomic profiling of early onset CRCs'. The session was concluded after panel discussion between presenters and participants.

Another technical session-5 on 'Animal and Medical Biotechnology' was started with the invited talk of Dr. Ram Kumar Mishra, Department of Biological Sciences, Indian Institute of Science Education and Research Bhopal on the topic 'Getting insights on cancer: Ex vivo laboratory approaches to delineate the menace'. The session was chaired by Dr. Ram Kumar Mishra and co-chaired by Dr. Pankaj Suman, National Institute of Animal Biotechnology, Hyderabad, Telangana. Second invited talk was delivered by Dr. Pankaj Suman on the topic 'Field applicable aptasensor for detection of residual antibiotics in animal food products' followed by another invited talk by Dr. Gopal Jee Gopal, C.G.Bhakta Institute of Biotechnology, Uka tarsadia University, Bardoli, Gujrat, on the topic 'Role of Recombinant DNA Technology in the Management of Disease'.

After this technical session-6 on 'Toxicology' was started with the invited talk of Prof Nalini Srivastava, School of Studies in Biochemistry, Jiwaji University, Gwalior on the topic 'Organophosphate pesticides:

From Neurotoxicity to Cell death'. The session was chaired by Prof Nalini Srivastava and co-chaired by myself. Session included one more invited talk by Prof. (Dr.) Ravi Kant Singh, Amity Institute of Biotechnology, Amity University Chhattisgarh, Raipur on the topic 'DNA damage as a Biomarker for Exposure: The Comet Assay Perspective'.

After lunch, technical session-7 on 'Industrial and Microbial Technology' was started with the invited talk by Dr. Mithilesh Jaiswal, Biotechnology Lab, Research and Development Division, Tropilite Food Pvt. Ltd, Gwalior on the topic 'Role of Probiotics microbes in Health benefits and Carrier build up'. The session was chaired by Dr. Mithilesh Jaiswal and co-chaired by Dr. Brajesh Barse, International Centre for Genetic Engineering and Biotechnology, New Delhi. Further, Dr. Brajesh Barse delivered a talk on the topic 'Second generation biofuel: India perspective on lab to market research program'. In this continuation, two more invited talks were delivered by Dr. Pankaj Rai, Department of Biotechnology, Faculty of Biosciences, Invertis University, Bareilly followed by Dr. Abhishek Mathur, Prathista Industries Limited, Telangana State, India. Dr. Rai deliberated on the topic 'Substrate Pretreatment Technologies for Biohydrogen Production from Biomass' and Dr. Abhishek Mathur talked about 'Biological Nanoparticles based on Microbial Metabolites: effective Agents for Sustainable Agriculture in terms of growth promotion and Insecticidal/Pesticidal Activities' as a last invited talk of this technical session and conference.

On day -2 there were total 9 parallel sessions for the oral presentations of participants from India and abroad. Parallel sessions were conducted online on google meet platform with distinguished scientists and researchers as chairperson and co-chairperson in different sessions in which total 212 presentations were conducted.

Valedictory session was graced by chief guest Prof. (Dr.) Sangeeta Shukla, Vice Chancellor, Meerut University. During this session Vice Chancellor AUMP Lt. J. V.K.Sharma (AVSM Retd) was present along with Pro-Vice Chancellor AUMP Prof. (Dr.) M.P. Kaushik participants, Convener of the conference Prof.(Dr.) R.S. Tomar. Chief guest addressed and described the necessity of such type of conferences for faculty and students perspective. Afterwards, VC, AUMP addressed faculty members, participants and students. Prizes for three best oral presentations were along with 10 consolation prizes out of all parallel sessions were announced during this session.

Prize for three best oral presentations were grabbed by Deepali Rawat from National Institute of Animal Biotechnology, Hyderabad, Telangana; Rajshree Dutta from Indian Statistical Institute Kolkata and Meenakshi Dubey from Delhi Technological University, New Delhi. The concluding remark of the conference was proposed by Convener of the 2ndInternational Conference Prof. (Dr.) R.S. Tomar. In the last, vote of thanks was proposed by Dr. Vikas Shrivastava, Organising Secretary, Int-BIONANO-2022.



Director AIB

Prof. (Dr.) Devendra Kumar Pandey
Director-Outcome

Prof. (Dr.) M. P. Kaushik Pro –Vice Chancellor

Hon'ble Vice Chancellor