

**DEPARTMENT OF MICROBIOLOGY**

**INTERNATIONAL CONFERENCE REPORT**

A two-day International Conference on “The Frontiers of Microbiology: Man – Microbe Dynamics’ organised by Department of Microbiology, SIES College of Arts, Science and Commerce (Autonomous), Sion West, Mumbai in association with Microbiologists Society, India from 18<sup>th</sup> to 19<sup>th</sup> of September, 2021 on the virtual platform of Microsoft Teams. The Conference comprised of wide horizon including all aspects of Microbiology from clinical, field, research to industrial and post-industrial arena. Inception of the event idea took place two months ago and was supported whole-heartedly by principal of SIES College, Dr. Uma Shankar and president of Microbiologists Society, India, Dr. A.M. Deshmukh. The event was partly Sponsored by National Centre for Science Communicators and was backed by Media partners – Nepal Journal of Biotechnology and Indian Express. Team comprised of Committee members as follows:

Convener - Dr. Manju Phadke

Joint Conveners - Dr. Pramod Ghogare and Mrs. Seema Ronghe

Organising Secretary - Ms. Lynn D'Lima

Joint Secretary - Ms. Carol Braggs

Editorial Committee - Dr. Manju Phadke; Dr. Pramod Ghogare; Ms. Deepika Tambe and Ms. Carol Braggs

Technical Committee - Ms. Hera Azmi; Ms. Pooja Mourya; Ms. Akanksha Shenoy; Ms. Jyoti Babar; Ms. Reshmi Das and Mr. Vivek Parab.

The total number of registrations for the conference were 250 with 44 abstract presentation participants. The conference was streamed live on Youtube and garnered more than 500 views. The conference was inaugurated by playing Sarasvati Vandanam and National Anthem of India in the presence of principal of SIES College, Dr. Uma Shankar and president of Microbiologists Society, India, Dr. A.M. Deshmukh, eminent speaker, colleagues and enthusiastic attendees. Dr. Uma Shankar and Dr. A.M. Deshmukh delivered a supportive and motivating speech lifting the spirit of the conference to a new height. It was followed by a short introductory talk by Dr. Manju Phadke, HoD of Microbiology Department and Mrs. Seema Ronghe, Ex- HoD of Microbiology Department.

Day 01 (Saturday, 18.09.2021)

1<sup>st</sup> talk of the day was by Dr. Sanket J. Joshi moderated by Dr. Pramod Ghogare. The talk focused on – ‘Petroleum industry and microbial biotechnology: applications and challenges’. It narrowed to the point that a probable solution to environmental pollution could be the use bioproducts and microbial processes in petroleum industry, as it is comparatively less toxic, showed better efficiency, and most importantly environmental friendly nature. Biosurfactants,

biopolymers, bio-solvents, biogases, bio-acids, and microbial biomass are such green products which have proven applications in petroleum industry. Such as, for enhancing the oil recovery, oil field produced water treatment, oil spill bioremediation, prevention and mitigation of oilfield souring (H<sub>2</sub>S issues because of Sulphate Reducing Bacteria), and many more.

2<sup>nd</sup> talk of the of day was by Dr. Vasudeo Zambhare moderated by Ms. Deepika Tambe. It focused on the on-going concept that cleanliness and sanitation awareness increased globally due to covid pandemic which increased demand and use of personal hygiene and home care products, but these products contain hazardous chemicals which are carcinogenic and toxic to all types of life forms. Bio based cleaning products are future alternatives to these chemicals because these are 100% safe. Thereby encouraging to be more inclined to develop safer products.

3<sup>rd</sup> talk of the of day was by Dr. Trupti Gokhale moderated by Ms. Carol Braggs. The talk revolved around “Polymers Embedded With CuO And ZnO Nanoparticles: A Boon For Food Packaging”. It was a lucid explanation about the synthesis, optimization, and characterization of Nanoparticles. Exploring microbes for the synthesis of metal nanoparticles especially Zinc and copper was shown in the experiments carried out. The talk also highlighted the potential of the use of these nanoparticles as packaging material along with polymers to increase the shelf life of perishable food products.

In the afternoon session, set of abstract presentations comprising of broad 5 categories namely, Food, Medical, Environmental, Industrial and Cell-Molecular Biology, conducted 4 parallel MS Teams sessions, were judged by experts in the fields.

Day 02 (Sunday, 19.09.2021)

1<sup>st</sup> talk of the of day was by Dr. Poornima Rao moderated by Ms. Lynn D'Lima. The talk focused on ‘Organic waste streams as feed-stocks for fermentative production of industrially relevant bio-acetic acid’. Organic waste represents a major share in the global waste, causing its disposal to be one of the primary concerns of the society. organic waste can be used to produce industrially relevant platform chemicals using fermentation process in a cost effective manner. Its gainful utilization targets the concern associated with waste management and disposal.

2<sup>nd</sup> talk of the of day was by Dr. Ruchi Srivastava moderated by Ms. Akanksha Shenoy. The talk revolved around ‘Microbiological aspects of a robust industrial food safety programme’. The talk highlighted points such as PRP and HACCP and their importance in Food Industry. Food Safety, Food Defence and Food-Fraud Mitigation were also explained. The talk later streamed to ‘Farm to Fork’ concept and essential case studies.

3<sup>rd</sup> talk of the of day was by Dr. Prafull Ranadive moderated by Mr. Vivek Parab. The talk focused on 'Fermentation process development - from discovery to commercialization'. It shed a light on the fermentation process development and its journey from discovery of the drug to its commercialization. The talk highlighted the applications of fermentation which utilize microorganisms and their metabolites as a source of drugs, probiotics, biofertilizers and applications of algae, plant cell and animal cell cultures in fermentation. These applications include Drugs from anti-cancer, Nutraceuticals, Steroids, anti-dementia, anti-obesity, vitamins (Vit B12).

In the afternoon session, set of abstract presentations comprising of broad 5 categories namely, Food, Medical, Environmental, Industrial and Cell-Molecular Biology, conducted 4 parallel MS Teams sessions, were judged by experts in the fields.

The abstract presentation session were succeeded by Valedictory Function which was addressed by Dr. A. P. Jayaraman followed by

4<sup>th</sup> talk of the day by Dr. Gokul Shankar Sabesan moderated by Dr. Pramod Ghogare. The talk revolved around the topic 'Food safety in hospitality industry – bridging gaps between consumer's expectation v/s reality'. It highlighted transational trade; travel; and migration and globalization of food production, manufacturing, and marketing pose greater risk of cross-border transmission of infectious diseases and food-borne illness. The risk is higher especially with small food outlets and road side vendors which are generally not monitored by any health authorities. It dived into Crucial points like HACCP and identification of CCPs and their implementation at the crude level. The talk left in an important message to the attendees - All that is clean need not be hygienic.

The stage was then open for participants to share their experience and feedback of the conference.

The two-day conference came to an end with the Closing remarks and Vote of Thanks delivered by Dr. Pramod Ghogare and finally playing the National Anthem of India.



Dr. Manju Phadke  
Head, Department of Microbiology



Mrs. Uma Shankar  
Principal