

## **Report on the inaugural session of the One- Day National Seminar on Contribution of Microbial Science for Societal Development - II**

The Department of Microbiology, Sikkim University organized a one-day National Seminar on Contribution of Microbial Science for Societal Development-II on 5th March, 2025 at the Cauvery Hall of the University. The Seminar aims to highlight the advancements and contributions of research in food microbiology, medical microbiology, environmental microbiology, industrial microbiology etc. for societal development. The inaugural session of the Seminar was presided over by the Hon'ble Vice- Chancellor of Sikkim University Prof. Dr. Jyoti Prakash Tamang as the Chief-Guest. Head of Department of Microbiology Dr. Nagendra Thakur welcomed all the guests and gave a brief introduction of the Seminar wherein he mentioned about the importance of micro- organisms. Vice- Chancellor Prof. Dr. Jyoti Prakash Tamang in his address mentioned the importance of microbiology and correctly mentioned this era to be the era of Microbiology. He mentioned that a lot of research is being conducted on gut microbiota, probiotics and faecal therapy. Prof. Tamang said that any research without in such fields should be supported by clinical trials. In this Seminar the final year research scholars presented their papers related to their area of study. Prof. Tamang stated this practice of paper presentation aims to to give more exposure to the students that would enhance their oratory and presentation skills..

Registrar, Prof. Laxuman Sharma also addressed the gathering and spoke about solid waste management and the role of microbes. He also mentioned that organic farming is not sustainable in the absence of microbes Prof. Sharma also spoke on the challenges, management of nutrients, pest and disease management in organic farming.

The technical session of the conference was divided into sub-themes of Microbiology, including Food Microbiology, Industrial Microbiology, Environmental Microbiology, Agricultural Microbiology, and Medical Microbiology. In the Food Microbiology session, topics such as molecular docking and molecular dynamics simulation of *bemerthu*, metagenomic insights into fermented bamboo shoots of Tripura, and probiotic and safety evaluation of yeast strains from naturally fermented yak milk products and transcriptome of *tempe*, fermented soybean food f Indonesia were presented. The Environmental Microbiology session featured topics like heterologous expression of thermostable  $\alpha$ -amylase from a hot spring microbe in Sikkim. In the Industrial Microbiology session, presentations included studies on the effects of *Cohnella xylanilytica* RU-14 derived cellulase on substrate structural characteristics, bioethanol production, and fermentation yield, as well as the biochemical, structural, and functional characterization of recombinant endocellulase BsCelGH5 from *Bacillus* sp. YE16 isolated from yak dung. The Medical Microbiology session covered research on the antibiotic potentiating effect of *Bauhinia purpurea* L. against multidrug-resistant *Staphylococcus aureus*, the antibacterial potential of methanol bark extract from *Terminalia arjuna* (Roxb. ex DC.) Wight & Arn against clinical isolates of multidrug-resistant *Pseudomonas aeruginosa*, and the antifungal activity of *Actinomyces* isolated from the rhizosphere of *Artemisia vulgaris* L. in the Sikkim Himalayas. In the Agricultural Microbiology session, studies on plant growth-promoting rhizobacteria (PGPR) under different citrus (*Citrus*

*reticulata* Blanco) based intercropping systems in long-term organic farming were discussed. The judges for the technical sessions were Prof. Dechen Domu Tsering from the Department of Microbiology, Sikkim Manipal Institute of Medical Sciences, Dr. Shrijana Gurung, Associate Professor from STNM Hospital, and Prof. Nilandri Bag from Sikkim University. The Best Speaker Awards were presented to Miss Prayatna Sharma, Mr. Rohit Das, Miss Sonia Tamang, Mrs. Pranita Pradhan, Mr. Souvik Das, Miss Dixita Chettri, Miss Manswama Boro, and Miss Mayouri Das.

















