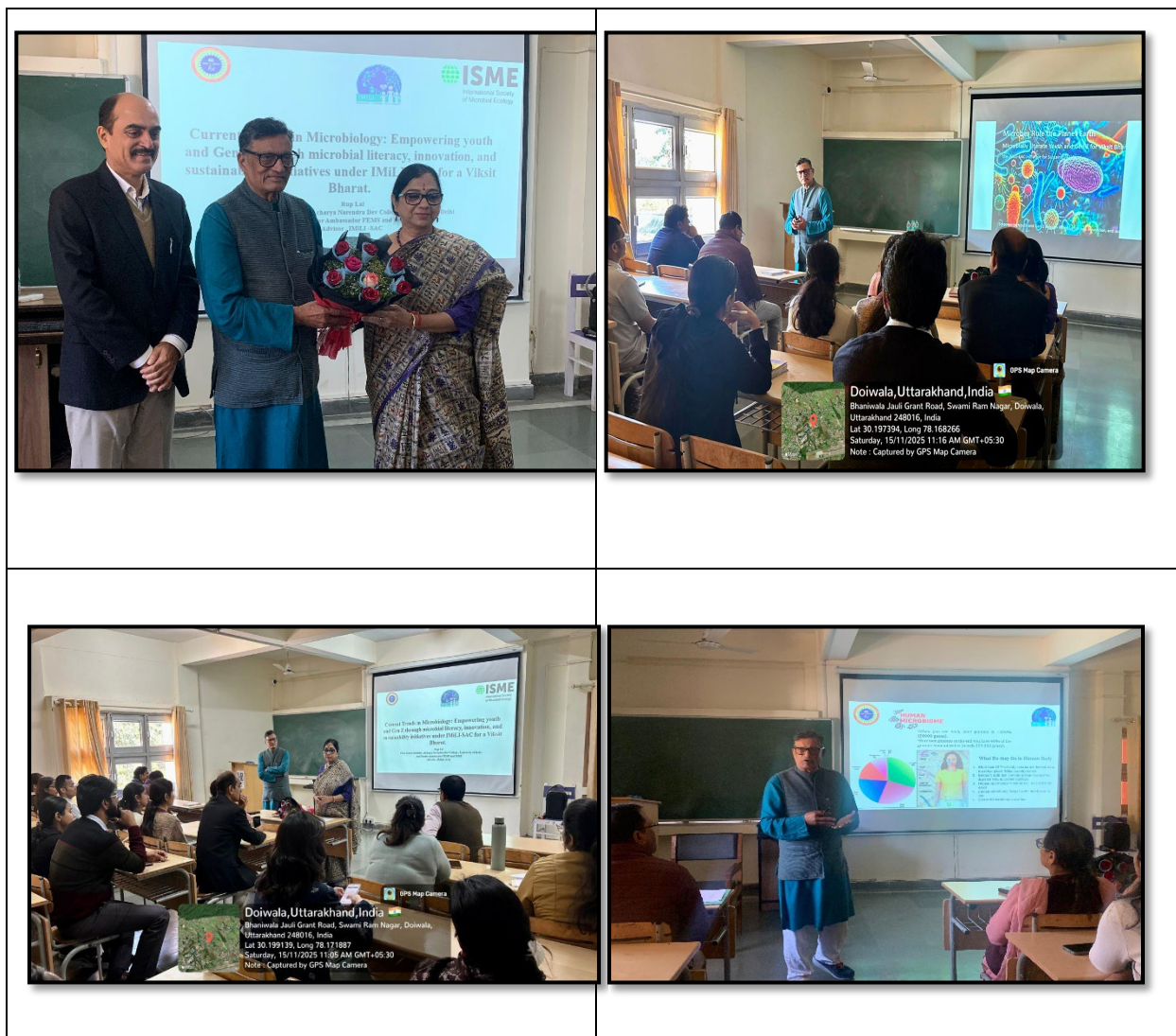


# Swami Rama Himalayan University

## Research and Development Cell & School of Biosciences, SRHU

A lecture by Dr. Rup Lal, INSA Senior Scientist from Acharya Narendra Dev College, University of Delhi, was scheduled on November 15, 2025, at 11:00 AM. The session, titled “*Current Trends in Microbiology,*” was organized at Lecture Theatre 7 (LT 7) in the School of Biosciences.

The lecture was organized to enrich students’ understanding of recent developments and emerging innovations in the field. The session was delivered by Dr. Rup Lal, INSA Senior Scientist, University of Delhi, an expert in microbial sciences, who provided a comprehensive overview of how microbiology continues to evolve with advancements in technology and interdisciplinary research.



Dr. Bindu Dey, Director Research, SRHU introduced Dr. Rup Lal to the students and faculty members. The lecture began with an introduction to the value of microbes in the ecosystem with special focus on human microbiome, emphasizing their immense diversity and the dynamic interactions between microbial communities and the host. The speaker highlighted how the gut microbiome is established early in life and gets influenced by factors such as diet, lifestyle, medications, environment, and genetics during entire life process.

A major section of the lecture focused on the intricate relationship between the gut microbiome and human health. Dr. Lal discussed recent scientific evidence linking gut microbial imbalance (dysbiosis) to several health conditions, including obesity, diabetes, inflammatory bowel disease, allergies, and mental health disorders. The concept of the gut–brain axis was explained in detail, showcasing how gut microbes communicate with the brain through neurochemicals, thereby influencing mood, behavior, and cognitive function.

Furthermore, the expert elaborated on emerging therapeutic strategies such as probiotics, prebiotics, synbiotics, and fecal microbiota transplantation (FMT). Practical recommendations for maintaining a healthy gut microbiome such as dietary fiber intake, fermented foods, reduced antibiotic misuse, and lifestyle modifications were also discussed.



**Way Forward:**

The session concluded with an engaging question–answer round, where participants interacted with the speaker to clarify concepts and explore research opportunities in the field of microbiome science. The lecture was highly informative and inspired students to think critically about the role of gut microbes in human health and disease.