

Brief Report

Department of Microbiology, School of Life Sciences of Sikkim University organized two days International Workshop on “**Frontiers in Science & Technology: Integrative Biotechnology and Molecular Biology**” on 24th–25th May, 2014 at Conference Hall of Tourism Department of Govt. Of Sikkim, Metro Point, 5th Mile, Tadong. The workshop was sponsored by Department of Biotechnology, Ministry of Science and Technology, Govt. of India. More than 157 participants registered and attended this workshop including students and faculty members of departments of Microbiology, Botany, Zoology, Horticulture and Chemistry. Participants also included 11 post-doctorate scholars from different universities of North East, scientists from Institute of Regional Centre of Bio-resources and Sustainable Development, some teaching and non-teaching staff of Sikkim University and Sikkim Govt. College. The programme was started with invocation song of the University performed by students of Microbiology. Coordinator of the Workshop and Dean, School of Life Sciences of Sikkim University Prof. Jyoti Prakash Tamang welcomed the invited speakers and audience. Prof. Tamang highlighted that Sikkim is a biological hub and natural laboratory for living organisms (plants, animals, human and microorganisms) due to its topography and altitude variation within a short distance. He said that large cardamoms, gingers, oranges, apples, indigenous varieties of chilies, native leafy vegetables, tea, ethnic foods and beverages, edible bamboo-shoots and mushrooms, edible wild plants and their fruits, wild honey, animal meats and river fish, cow and yak milk are food resources of the region. Medicinal and aromatic plants, wild and domestic ornamental plants including orchids are ‘cash-generators’ for Sikkim. Commercial uses of bio-resources with zero impact on environment depend on the application of biotechnology for holistic development. He empathized the need to have a concrete policy on biotechnology for the sustainable development of the Himalayas.

Dr. Vinod Kumar, Director, Department of Science and Technology, New Delhi inaugurated the workshop and highlighted the various R & D programmes of Department of Science and Technology, Govt. of India. Dr. Sunil Kaul, Chief Senior Research Scientist, Biomedical Research Institute, National Institute of Advanced Industrial Science & Technology (AIST), Tsukuba, Japan told the audience about DAILAB (DBT-AIST International Laboratory for Advanced Biomedicine) and highlighted the collaborative research activities of AIST and other laboratories in India.

The first technical session chaired by Prof. Rakesh Bhatnagar, Dean, School of Biotechnology, JNU, New Delhi was started with lecture by Dr. Renu Wadhawa, Group Leader, Biomedical Research Institute, National Institute of Advanced Industrial Science &

Technology (AIST), Tsukuba, Japan talked on “Mortalin - an hsp70 stress chaperone in human carcinogenesis”. Dr. K. P. Mohankumar, Chief Scientist, Indian Institute of Chemical Biology, Kolkata talked on “Leveraging Indian traditional medicine, Ayurveda to tackle neurodegenerative diseases”. Dr. K.M. Paknikar, Director, Agharkar Research Institute of DST, Pune talked on “Advances in nanobiotechnology: bioinspired innovation”.

The second technical session was chaired by Dr. Yoshihiro Ohmiya, Director, Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan. Dr. Sunil Kaul of AIST, Japan talked on “Science of Ashwagandha benefits on aging and cancer”. Prof. Ashok Pandey, Deputy Director, CSIR-National Institute for Interdisciplinary Science and Technology, Trivandrum talked on “Production of second generation biofuels in India: Status and perspectives”. Dr. D. Sundar of Department of Biochemical Engineering and Biotechnology, Indian Institute of Technology, New Delhi talked on “Getting a handhold on designing proteins for human therapeutics”. Dr. Pratap K. Pati of Department of Biotechnology, Guru Nanak Dev University, Amritsar talked on “Biotechnological intervention in improvement of commercial value of *Withania somnifera* (L.) Dunal’.

The third technical session was chaired Prof. Ashok Pandey. Dr. Yoshihiro Ohmiya of Japan talked on “Cell based assay and imaging using bioluminescence systems”. Prof. Gurcharan Kaur of Department of Biotechnology, Guru Nanak Dev University, Amritsar talked on “Search for natural products with neuroprotective potential”. Prof. Narayan S. Punekar of Indian Institute of Technology, Bombay talked on “Molecular tools for fungi”. Prof. Rakesh Bhatnagar of JNU talked on “Genetically engineered vaccine against anthrax: from clone to clinical trials”. Prof. Jyoti Prakash Tamang delivered a talk on “Modern concept of protocol for studying fermented foods”. The workshop aimed to deliver series of lectures to audience on the recent technologies in biological sciences focusing on biomedical research. During two days of workshop, students got exposure to a variety of talks aimed to motivate them for integrative biotechnology and molecular biology.

Dr. H.K. Tiwari, Head, Department of Microbiology offered *khada* to all invited speakers and thanked the speakers. Students and faculty members interacted with eminent biological scientists.



Prof. Jyoti Prakash Tamang, Dr. Vinod Kumar and Dr. Sunil Kaul



Students and staff of Department of Microbiology with guest speakers.