

WELCOME TO OUR

MBUST Insights

Contributors of this Newsletter Issue:

Dr. Sarbesh Das Dangol, Dr. Kishor Timsina, Dr. Sabina Shrestha, Dr. Bhushan Shrestha, Dr. Anupama Shrestha, and Mr. Shambhu Adhikari

COMMUNITY CONSULTATION MEETING MBUST launches Sustainable & Resilient Infrastructure program

By Dr. Kishor Timsina and Mr. Shambhu Adhikari



The MBUST team in collaboration with the Hotel and Tourism Entrepreneurs' Association of Chitlang, organized a community consultation meeting to introduce a new graduate-level program on Sustainable and Resilient Infrastructures for Tourism, scheduled to begin in the winter session of 2024 CE. The event, held on August 5, 2024 CE, was facilitated by Dr. Kishor Timsina and attended by over forty participants, including prominent tourism entrepreneurs from Chitlang. Key figures in attendance included MBUST's president and vice president, Mr. Ram Saran Nepal (Chairperson of the Hotel and Tourism Entrepreneurs' Association), and special guests like Mr. Maniram Lamichhane (Director of the Nepal Tourism Board), Mr. Ravi Jung Pandey (Senior Tourism Specialist), and Dr. Kirti Kusum Joshi (Dean of Lumbini Technological University).

The meeting began with a welcome from Associate Prof. Padma Sunder Joshi, followed by Prof. Dr. Rajendra Dhoj Joshi, who highlighted the course's potential impact on the economy and its relevance to Chitlang's growing tourism sector. Dr. Kishor Timsina provided an overview of the proposed Master's program and invited feedback from stakeholders.

The discussion emphasized the importance of sustainable tourism, conservation of biodiversity, protection of rivers, and preservation of heritage. The participants expressed gratitude to MBUST for addressing critical needs and positioning Chitlang as a hub for sustainable and resilient tourism education.

Dr. Kirti Kusum Joshi summarized the discussions, and Dr. Sanjay Nath Khanal concluded the event with a vote of thanks, acknowledging the valuable contributions of all participants.



Participation at SIVB, USA Conference

DR. STAN GELVIN GIFTED BACTERIAL MATERIALS FOR CLONING

By Dr. Sarbesh Das Dangol

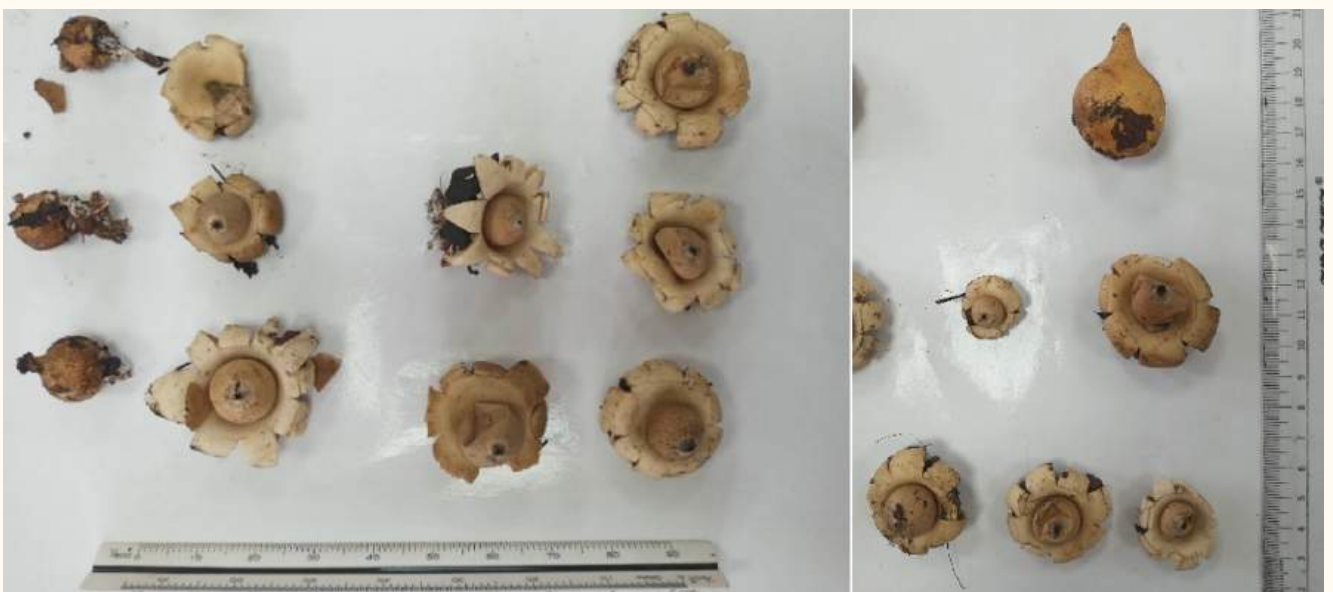
The 2024 World Congress on In Vitro Biology, organized by the Society for In Vitro Biology (SIVB), was successfully concluded in St. Louis, United States of America (USA), from June 8 to June 12, 2024. Like last year, Dr. Sarbesh Das Dangol volunteered at this conference and presented a paper. This year, Dr. Sarbesh orally presented his research paper entitled "Genome Editing in Nepali Rice to Develop Blast Resistance: Its Potentials and Challenges" at the conference. Moreover, he also presented a poster entitled "Investigating the Occurrence of Rice Blast Disease in Different Geographical Locations of Nepal." The participation from the audience was very enthusiastic. The room was packed, and the crowd was apparent even at the doors, which required the conference room door to be kept open throughout the presentation session. During the Q&A session, Dr. Sarbesh received several questions and suggestions to improve his work on his research in rice blast disease using genome editing technology. Dr. Sarbesh also met Dr. Stanton B. Gelvin, who gifted the MBUST team bacterial materials for cloning: *Agrobacterium* strains EHA105-At564, AGL1-At1449, and EHA101-At502, and *E. coli* strain Top10. Dr. Gelvin was keen to further collaborate with the MBUST team regarding genome editing research. Dr. Sarbesh is also an ad hoc committee member at SIVB.



Mushroom Collection in Chitlang

WE COLLECTED MUSHROOMS ON AUGUST 23, 2024

By Dr. Bhushan Shrestha



Mr. Suraj Chaudhary, Mr. Atmaz Kumar Shrestha and Mr. Pradip Jimba collected mushrooms in Chitlang on August 23, 2024. Earthstar mushroom (*Geastrum* spp.) was also identified from Chitlang and brought to the MBUST Mushroom Laboratory.

Meeting with PlantGENE, USA Team

MEETING WAS FACILITATED BY RENOWNED SCIENTISTS OF
PLANTGENE (USA) IN ST. LOUIS, USA

By Dr. Sarbesh Das Dangol



The PlantGENE members Dr. Ritesh Kumar, Dr. Samatha Gunapati, Dr. Sarbesh Das Dangol, Dr. Joyce Van Eck, Dr. Aimee Malzahn, Dr. Fiorella Spies, Katie Toomey, and Minjeong Kang met in St. Louis, USA. Dr. Joyce, the chair of PlantGENE, and Dr. Aimee, the coordinator, organized the meeting. The members discussed how PlantGENE can contribute to the community and the future programs the committee should organize and execute. Dr. Sarbesh, who represented the MBUST team, proposed that the committee assist the MBUST team in co-teaching our students and co-supervising our thesis students.

Moreover, Dr. Sarbesh emphasized that the PlantGENE community should extend their support to the MBUST team in securing research materials, including the provision of a plasmid depository, arranging visits from scientists to the MBUST facility to train our students, and involving university faculty members and students in volunteering sessions and conferences.

The meeting concluded with a luncheon hosted by Dr. Joyce and a photo session to create a memorable moment for all the PlantGENE members.

The PlantGENE community also facilitated a meeting with Dr. Stanton B. Gelvin, who gifted research materials to the MBUST team.

Culture Development of Bagale Chhyau

TISSUE AND SPORE ISOLATION

By Dr. Bhushan Shrestha

We are conducting experiment to domesticate wild Bagale chhyau collected from Chitlang forest. We also isolated tissue and spore from Bagale chhyau on water agar (WA) plate. Mr. Suraj Chaudhary and Atmaz Kumar Shrestha are conducting thesis research on wild edible and medicinal mushrooms of Chiltang under the supervision of Dr. Bhushan Shrestha.





Visit of Praramva Biotech

THE FOUNDERS EXPRESSED THEIR EAGERNESS TO COLLABORATE

By Dr. Sarbesh Das Dangol

It was a great pleasure to host the visit of the founding members of Praramva Biotech Pvt. Ltd. Praramva Biotech, founded in 2011 CE by Manish Pratap, Baidhyanath Kumar Jha, and Ashok Kumar Bhattarai, is an industry that manufactures products related to crop protection and nutritional values. Today, Praramva Biotech is a leading vermicomposting manufacturer in the nation. The company has its own dedicated laboratory that produces biopesticides and products related to disease mitigation, management of soil health, and crop nutrition. The founding trio discussed various aspects of plant growth-promoting rhizobacteria (PGPR) and mycorrhiza in agricultural research and expressed their interest in collaborating with our university team. They also suggested that the MBUST team invest in entrepreneurs, convert theses into industrial products, and collaborate with other industries in Nepal. In response, Dr. Sarbesh highlighted the university's policy, which requires every MBUST team to be associated with an industry. Moreover, Dr. Anupama Shrestha and Dr. Sarbesh informed the founders that MBUST is soon establishing an incubation center for entrepreneurial teams, which will directly support our student graduates. Mr. Atmaz Shrestha gave the trio a tour of the Mushroom Laboratory, and Dr. Anupama briefed them about the laboratory she leads.





Visitors from NIST and TU

LAB TOUR FOLLOWED BY COLLABORATIVE TALKS

By Dr. Sarbesh Das Dangol

Dr. Gorkha Raj Giri, lecturer at NIST National School of Sciences had an adventurous pleasant travel to MBUST. Dr. Gorkha and his student arrived at the top of Chandragiri Hills via cable car and hiked through the forest to reach down the Chitlang valley to the university. Dr. Gorkha visited the laboratory facilities at Organic Agriculture and Forest Biomaterials and interacted with Dr. Sarbesh Das Dangol, Dr. Anupama Shrestha, Dr. Bhushan Shrestha, Dr. Sudip Pandey and Dr. Sabina Shrestha. Dr. Gorkha was amused by the progress made by the university in a very short period of time, and had a special talk on the prospects of collaboration with MBUST team utilizing GC-MS/MS instrumentation.

EXPLORING *IN SILICO* RESEARCH

By Dr. Sabina Shrestha

Dr. Jhashanath Adhikari Subin from Scientific Research and Training Nepal interacted with AI and Data Science students to discuss the potential of *in Silico* research and application of cheminformatics databases.



Visit to Colleges in Kathmandu

BRIEFING OF OA & FBM PROGRAMS

By Dr. Sarbesh Das Dangol

Dr. Anupama Shrestha and Dr. Sarbesh Das Dangol visited Himalayan White House College in Putalisadak and Himalayan College of Agricultural Sciences & Technology (HICAST) in Kirtipur to provide information about the university, including its motto, faculty members, research interests, and Organic Agriculture course materials.



FOSTERING RESEARCH COLLABORATION

By Dr. Sabina Shrestha



Dr. Sabina Shrestha and Dr. Sudip Pandey from FBM program visited Botany Department at Patan Multiple Campus, Tribhuvan University (TU) and introduced programs of MBUST to TU students and faculty members to explore potential research collaborations. The participants were very enthusiastic and the program was fruitful.

International Experts in OA Program

ONLINE LECTURES

By Dr. Bhushan Shrestha

Prof. Dr. Shin-Yee Fung (Head of Department of Molecular Medicine, Faculty of Medicine, Universiti Malaya, Malaysia, and Fellow of Royal Society of Biology UK) delivered online lecture on “Nutritional and health benefits of mushroom (August 6 and August 27, total 4 hours)”.

Dr. Kentaro Hosaka (Curator of Mycology, Department of Botany, National Museum of Nature and Science, Japan delivered online lecture on “Mushroom morphology, taxonomy, biodiversity, biogeography and ecology; methods of studying basic mycology including fieldwork, molecular lab (August 13 and August 20, for 4 hours)”.

Presentation at Grammar School

TEACHING OF MUSHROOM TO STUDENTS

By Dr. Bhushan Shrestha

Dr. Bhushan Shrestha delivered presentation at Grammar School in Koteswor, Kathmandu, to the students and faculty members on “Use of mushroom as a source of nutrition by local communities in Chitlang”.



RBPR Laboratory Visit

A QUEST TO MINIMIZE THE USE OF PESTICIDES

By Dr. Sabina Shrestha



Dr. Sabina Shrestha and Dr. Sudip Pandey visited the Rapid Bioassay for Pesticide Residues (RBPR) analysis facility at the Central Agricultural Laboratory in Kalimati Fruit and Vegetable Wholesale Market on August 25. Their observation aimed to explore research opportunities and mitigation need to lessen the harm caused by pesticide use.



Mushroom Culture

FRUITING BODY PRODUCTION USING BROWN RICE

By Dr. Bhushan Shrestha



In the Mushroom Laboratory, liquid spawn was inoculated in brown rice medium for the trial of successful fruiting body production of *Cordyceps militaris*. We further plan to develop this mushroom for commercial production. Mr. Suraj Chaudhary and Mr. Atmaz Shrestha are conducting thesis in this research led by Dr. Bhushan Shrestha.



Guest Lecture by Dr. Suraj Baidya

DR. SURAJ IS A SENIOR SCIENTIST FROM NARC

By Dr. Anupama Shrestha



On August 22, 2024, Dr. Suraj Baidya focused on the invasive plant diseases in Nepal along with its control strategies. The session was insightful and students gained knowledge on plant pathogenic nematodes and emerging diseases that can be a threat to the plants of Nepal.

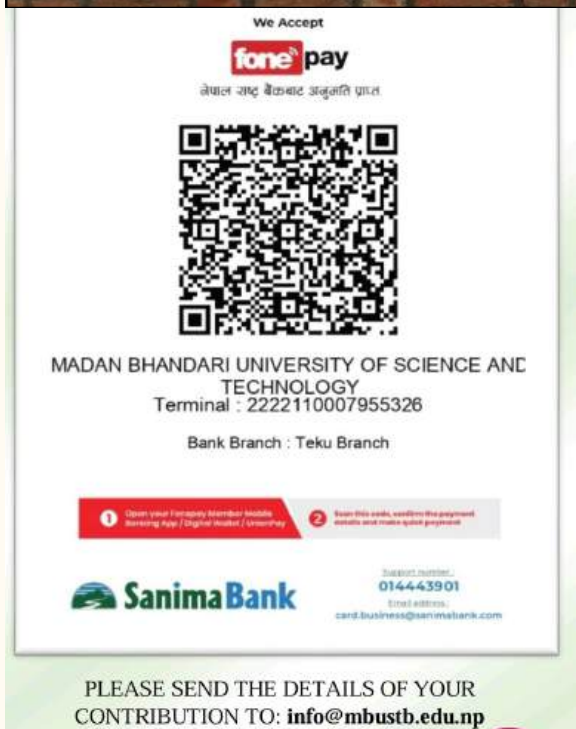
Guest lecture series for graduate students are under the following topics:

1. Introduction and Identification features of different Plant Parasitic Nematode in Nepal.
2. Threat and challenges of common and invasive plant diseases in Agriculture system and their management.

The MBUST family would like to express gratitude to Dr. Baidya for his time and knowledge despite his busy schedule.



By Dr. Sabina Shrestha



Every support counts. Please donate to our endowment fund using the QR code of SanimaBank MBUST account. Your support will be utilized in building a world-class university for happy and prosperous Nepal. Also, the fund will support the education and research activities of our students.

Programs, Intake and Financial Support

NOVEMBER 2024 ADMISSION

By MBUST Team

Based on applications received till August 27, 2024 – the original deadline for applications – the admission capacity for November 2024 session may not be filled. Therefore, this Call for Applications is issued for the following programs (Deadline September 13, 2024). The number of places available for each category of financial support is indicated in the table below.

Program	Total intake	Tuition fee waiver and scholarship	Tuition fee waiver			
			100%	75%	50%	25%
MAS in Organic Agriculture	Up to 16	-	-	-	-	2
MAS in Forest Biomaterials	Up to 16	1	2	2	2	8
MAS in Sustainable and Resilient Infrastructure (specialization – tourism)	Up to 16	-	-	1	2	8

Editorial Team

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