



News Bulletin of Institutional Biotech Hub, Bahona College, Jorhat, Assam, India

Department of Biotechnology
Government of India

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Institutional Biotech Hub (IBT Hub) is an initiative of Department of Biotechnology (DBT), Govt. of India with a view to promote research and for development of skilled and trained manpower. The IBT Hub at Bahona College was established in the year 2013. Since then Biotech Hub has been conducting training programs, workshops, seminars/webinars and outreach programs through offline and online mode in basic areas of Biotechnology and thus contributing to the growth of trained manpower and biotechnology in the region.

From Principal's Desk

From Coordinator's Desk

Dr. Prasanna Kr. Dutta
Principal
Bahona College

Dr. Sangeeta Das
Coordinator
Inst. Biotech Hub, Bahona College

It gives me immense pleasure that Institutional Biotech Hub, Bahona College is publishing its the news bulletin 'Bio-Buzz' for the session 2022-23. I hope the Biotech Hub will continue its quality work in research through various collaborations and projects in coming years. I wish all the success in its future endeavors of the Institutional Biotech Hub, Bahona College.

Biotech Hub is always working for the popularization of science & technology among its different stakeholders. The 2nd volume of this bulletin is showcasing its various activities in the academic year 2022-23. I thank our Principal Sir for his pieces of advises and support in doing so. I sincerely hope that the Hub will serve better towards quality research work in future.

PUBLICATIONS

Detection of phytochemical content and study of antibacterial activity of leaf extracts of *Terminalia chebula*, *Nyctanthes arbor-tristis* L. and *Cinnamomum tamala* against *Escherichia coli* and enteric bacteria isolated from street food

Dissertation submitted to the School of Health Science (SHS), The Assam Kaziranga University, Jorhat for partial fulfillment of the requirement for the degree of

Master of Science in Microbiology

By
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DETECTION OF PHYTOCHEMICAL CONTENT AND STUDY OF ANTIBACTERIAL ACTIVITY OF LEAF EXTRACTS OF TERMINALIA CHEBULA, NYCTANTHES ARBOR-TRISTIS L. AND CINNAMOMUM TAMALA AGAINST ESCHERICHIA COLI AND ENTERIC BACTERIA ISOLATED FROM STREET FOOD

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ABSTRACT

Plants are house of bioactive molecules showing diverse medicinal values. Alkaloids, tannins, terpenoids, flavonoids, etc. are certain phytochemicals found in plants. These phytochemicals show antimicrobial effect on various groups of microbes. In the present study, dried leaves from *Terminalia chebula*, *Nyctanthes arbor-tristis* and *Cinnamomum tamala* plants were used. These plants are very common plants of Assam and locally known as 'xilikha', 'sewal' and 'tezpat' respectively in Assam. T. chebula

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ABOUT THE EDITOR

Dr. Sangeeta Das

She is an Assistant Professor of Botany at Bahona College, Jorhat, Assam, India. She did her Ph.D. from Dibrugarh University, Assam and worked as DST Women Scientist at Assam Agricultural University, Jorhat, Assam. She has edited 3 books and published a number of research papers and articles in reputed journals and books. She has presented a number of research papers in different National and International Seminars all over the country and delivered lectures as a resource person both inside and outside the country. She is also a member of the editorial board (Honorary) in the International Journal of Integrated Research & Development (IJIRD), Journal of Intellectuals (JOI), and has reviewed papers in many National and International Journals.

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Air Pollution and Prevention

Editor
DR. SANGEETA DAS

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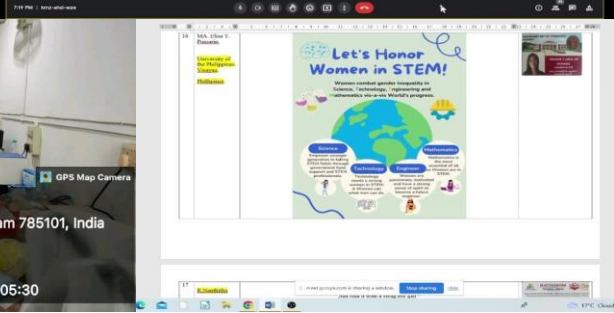
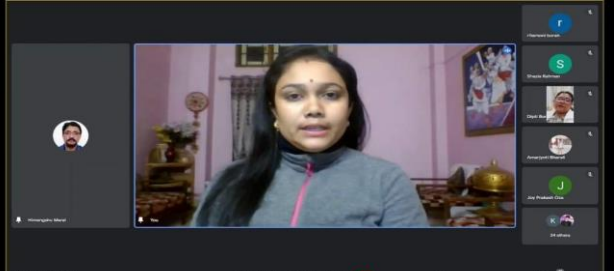
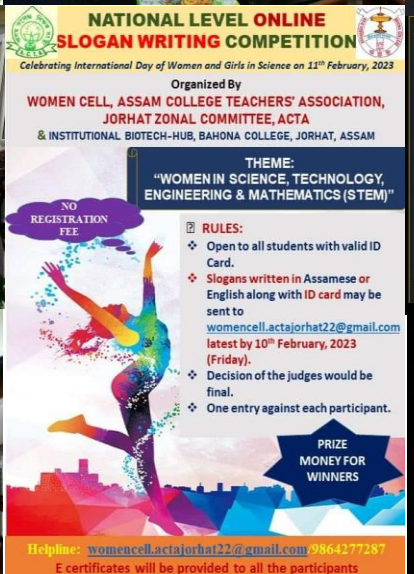
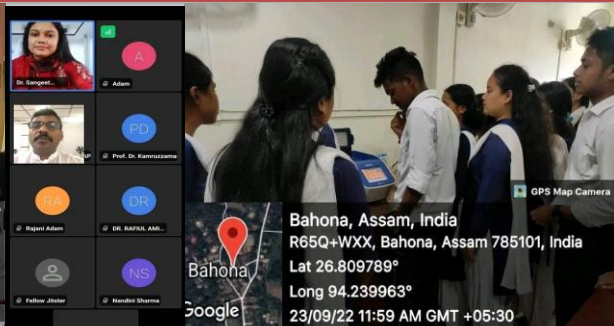
OUTREACH ACTIVITIES

Sl. No.	Name of the Programs	Duration	No. of Participants	Level of participants
1	Outreach Program on Bioinstrumentation for the students of Revakanta Baruah High School, Jorhat.	1 day, July 25, 2022	19	Teachers, School students
2	Awareness and Outreach Program on Laboratory Safety and Instruments used in Microbiology for the students of Bahona Boys' High School, Jorhat.	1 day, May 20, 2022	40	Teachers, School students
3	MoU Signing Ceremony with Corexx, Guwahati, Assam	1 day, Oct. 10, 2022	10	Teachers
4	MoU Signing Ceremony with Farm2Food Foundation, Jorhat, Assam	1 day, May 09, 2022	08	Teachers

PROGRAMS CONDUCTED

Sl. No.	Title of the Programs	Duration	No. of Participants	Level of participants
1	Celebration of International Day for Women & Girls' in Science & Technology-Slogan Competition	1 day, Feb.11, 2023	42	Teachers, Research Scholars, Students
2	Celebration of World Wetlands Day	1 day, Feb.02, 2023	116	Teachers, Students, Others
3	International Webinar on 'Air Pollution & Prevention'	1 day, Dec.2, 2022	25	Teachers, Research Scholars, B.Sc. Students
4	Workshop on basics of Microbiology	1 day, Oct. 25, 2022	16	Teachers, B.Sc. Students
5	Workshop on Cell Biology & Microscopy	1 day, Oct.19, 2022	19	Teachers, B.Sc. Students
6	Workshop on Basic Tools and Techniques of Molecular Biology	1 day, Sept., 23, 2022	32	Teachers, B.Sc. Students
7	Togetherness Table-Saath Nirbhar Building Collective Well-being	1 day, May. 14, 2022	63	Teachers, B.Sc. Students
8	Workshop on Isolation and growth of <i>Escherichia coli</i> from water sample	2 days, April 26 & 27, 2022	22	B.Sc. Students

PHOTO SPEAK



Bamboo Tissue Culture in India: Importance and Future Research Prospects

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Bamboo is a versatile and important natural resource in India, with a wide range of applications in construction, paper, furniture, handicrafts, and food. However, the traditional method of propagation through seeds has limitations such as low germination rates, unpredictable growth, and genetic variability. Tissue culture techniques provide an alternative approach to bamboo propagation, offering several advantages such as rapid multiplication, uniformity, disease-free plants, and the possibility of genetic improvement. Bamboo tissue culture has several important applications in India, including rapid multiplication, efficient propagation, genetic improvement, conservation and export high-quality products from uniform planting material. Bamboo tissue culture has significant importance and potential for future research in India. The development of improved protocols, genetic transformation, cryopreservation, and the application of metabolomics and transcriptomics can lead to a more efficient and sustainable bamboo industry. The adoption of tissue culture techniques can also help conserve endangered species, preserve genetic diversity, and provide a reliable source of planting material for farmers and industries. Therefore, the promotion of bamboo tissue culture research in India is crucial for the growth and development of the bamboo industry. Overall, bamboo tissue culture is an exciting area of research in India with significant potential for growth and impact. As demand for sustainable and eco-friendly materials continues to increase, the development of high-yield bamboo varieties and bamboo-based bio products will become increasingly important.

MISCELLANEOUS



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