



Hindusthan

College of Arts & Science

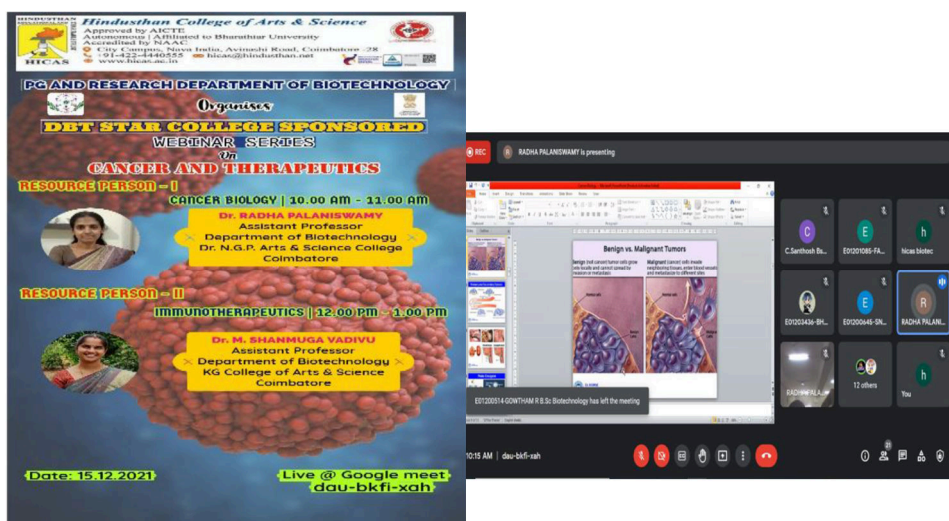
An Autonomous College -Affiliated to Bharathiar University
Approved by AICTE and Govt. of Tamilnadu
Accredited by NAAC-An ISO Certified Institution

DEPARTMENT OF BIOTECHNOLOGY

TEACHER ACTIVITIES (2021-2022)

CANCER AND THERAPEUTICS

The Department of Biotechnology, Hindusthan College of Arts, Coimbatore, organized a **DBT Star College scheme sponsored** Guest lecture entitled “**Cancer and Therapeutics**” on **15-12-2021**. The **chief guests, Dr. Radha Palaniswamy**, Assistant Professor, Department of Biotechnology, Dr. N.G.P. Arts & Science College, Coimbatore and **Dr. M. Shanmuga Vadivu** Assistant Professor Department of Biotechnology KG College of Arts & Science Coimbatore. The guest explained about Cancer spread in worldwide cases, death of male-female was explained by venn diagram. The difference between normal and cancer development and how the tumour getting progressed were clearly explained. In this session different types of cancer, the efficacy was picturized and discussed. Cancer symptoms and various types of treatment such as Surgery, Radiation therapy, Chemo therapy, Immunotherapy, Hormone therapy, Target therapy and stem cell therapy were explained. Immunotherapy and conjugated monoclonal antibodies and cancer vaccines were discussed. It helped clear understanding about cancer progression, prevention and treatments. There were 90 Students and 3 Faculty members attended the programme.



The glimpse and Brochure of the event

ONE - WEEK FACULTY DEVELOPMENT PROGRAMME (BIOPROSPECTING – AN OVERVIEW)

The Department of Biotechnology, Hindusthan College of Arts, Coimbatore, organized a **DBT Star College scheme sponsored** Guest lecture entitled “. The convenor was **Dr. K. Annapurna** Former Head Division of Microbiology ICAR-Indian Agricultural Research Institute New Delhi 110 012, India. **Dr. S. P. Shanthakumar**, Senior Associate, Reckit Benckiser (India) Ltd, Haryana. **Dr. D. J. Bagyaraj**, NASI Hon. Scientist & Chairman, Centre for Natural Biological Resources and Community Development (CNBRCD), Bangalore. **Dr. S. Karuppusamy**, Associate Professor, Department of Botany, Madura College, Madurai. **Dr. Archana Chugh**, Associate Professor, Indian Institute of Technology Delhi, New Delhi. **Dr. Harinder Singh**, Assistant Professor, Biological Sciences, Sunandan Divatia School of Science, SVKM's Narsee Monjee Institute of Management Studies, Mumbai. **Dr. Jegan Sekar**, Scientist, Microbiology Lab, MS Swaminathan Research Foundation, Chennai.

The programme explored the recent developments in bioproducts from various fields of the research

Day 1: In this session how, the plants acquire nitrogen by recruiting micro-organisms through mutualism was illustrated. The nodule formation from different types of plant species was also highlighted, Especially, a detailed experimental study of the soybean nodule microbiome revealed many important ideas about root nodule.

Day 2: A brief note of Good Agriculture Practice was exemplified with human health, Animal health and Crop health. The plague caused by a large number of insects on different host plants was highlighted. A detailed study of chickpea plant was demonstrated beginning with isolation to compound identification and its applications.

Day 3: An interesting talk on microorganisms and human welfare starts with a brief history, followed by different types of legume modulating bacteria were highlighted. How to increase the plant growth, nutrient uptake and suppression of the disease were discussed. Different types of microorganisms with target weed and specific ecosystems were tabulated and clearly explained.

Day 4: The importance of Taxol in chemotherapy and its functions were explained. An important medicinal compound of Camptothecin and isolation procedure were discussed. How to edit the gene and gene-editing mechanism, challenges and opportunities were highlighted.

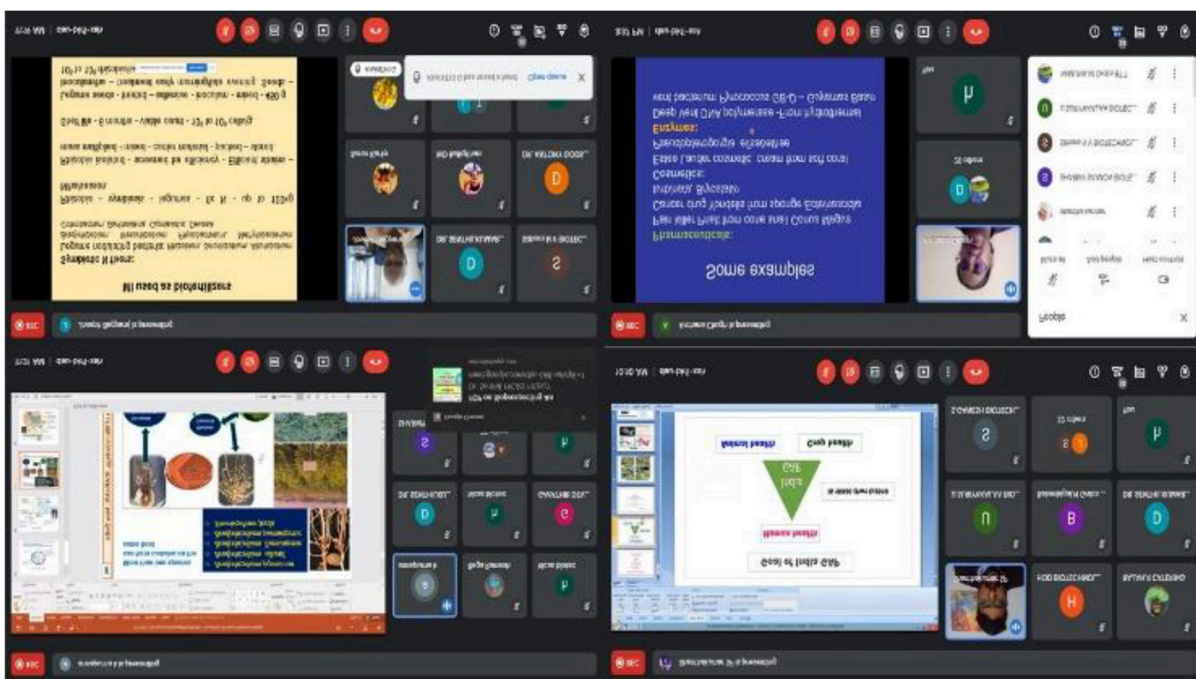
Day 5: Different marine species and their pharmaceuticals, cosmetics applications were highlighted. In this session, What and why bioprospecting is important were briefly explained. Economic aspects of marine species and their usage were discussed. Marine Biodiversity in Genetic, Species, Ecosystem and functional levels were characterized.

Day 6: Sir has given detailed information about enzymes and natural catalysts, In specific to an enzyme, the broad area of the application was highlighted such as Diagnosis and drug development. Knowing the characteristics of the novel enzyme with High specificity, activity and stability show an important point to us. Followed by the highlighted need for a novel enzyme it was more interesting. The importance of in silico process was well explained with examples and how computational methods working as a time-consuming process were appropriate sir. About Keyword search: you have directed

how to screen and collect the data from NCBI was useful for us to retrieve our needed data from a web source. Sir, also highlighted Homology modelling, phylogenetic analysis followed by Insilco characterization using bioinformatics tools

Day 7: Soil - A source of life beautifully explained with a short note. How soil works as a reservoir of Biodiversity and socio-economic value were highlighted. Importantly Soil food web including plants, organic matter, microorganisms, insects and animals were charted and explained. The importance of soil microorganisms and their vital functions in the soil ecosystem were highlighted. Impact on climate changes in agriculture and threats on soil function were step-wise explained clearly. A mechanism of bio inoculants such as direct and indirect pathways were picturized. There were 120 faculty members participated the programme.

PROGRAMME SCHEDULE DBT STAR COLLEGE SCHEME SPONSORED One - Week Faculty Development Programme on Bioprospecting - An Overview (21.12.2021 - 29.12.2021)	
<p>Title: Bioprospecting - Root nodule associated microbiomes Speaker: Dr. K. Annapurna Former Head Division of Microbiology ICAR-Indian Agricultural Research Institute New Delhi</p> <p>DAY 1 21.12.2021 Time: 11.00 AM - 12.00 PM</p>	<p>Title: Bioprospection of anticancer compounds from higher plants Speaker: Dr. S. Karuppusamy Associate Professor Department of Botany Madura College Madurai</p> <p>DAY 4 24.12.2021 Time: 03.30 PM - 04.30 PM</p>
<p>Title: Green to Gene Technology Speaker: Dr. S. P. Shanthakumar Senior Associate Reckit Benckiser (India) Ltd Sector 32, Gurgaon 122001 Haryana</p> <p>DAY 2 22.12.2021 Time: 10.00 AM - 11.00 AM</p>	<p>Title: Marine Bioprospecting: Issues and Challenges Speaker: Dr. Archana Chugh Associate Professor Kusuma School of Biological Sciences, Indian Institute of Technology Delhi New Delhi</p> <p>DAY 5 27.12.2021 Time: 03.30 PM - 04.30 PM</p>
<p>Title: Microorganisms and Human Welfare Speaker: Dr. D. J. Bagyaraj NASI Hon. Scientist & Chairman Centre for Natural Biological Resources and Community Development (CNBRCD) Bangalore</p> <p>DAY 3 23.12.2021 Time: 11.00 AM - 12.00 PM</p>	<p>Title: Finding better enzymes: In silico bioprospecting Speaker: Dr. Harinder Singh Assistant Professor Sunandan Divatia School of Science SVKM's Narsee Monjee Institute of Management Studies, Mumbai</p> <p>DAY 6 28.12.2021 Time: 11.00 AM - 12.00 PM</p>
	<p>Title: Smart Microbial Inoculants for sustainable agriculture Speaker: Dr. Jegan Sekar Scientist Microbiology Lab MS Swaminathan Research Foundation Chennai</p> <p>DAY 7 29.12.2021 Time: 11.00 AM - 12.00 PM</p>




The glimpse and Brochure of the event

ENTREPRENEURSHIP TRAINING PROGRAMME

The Department organized the **DBT STAR** Scheme sponsored One-day Entrepreneurship Training Programme on “**Organic fertilizer preparation for Terrace Gardening**”, for III UG and I PG students, held on **12-04-2022**. The resource person, **Dr. M. MURUGAN**, Assistant Professor, Sri Kaliswari College, Sivakasi conducted the training on the preparation of **Panchakavya, Amirthakaraisal, GGC karaisal, EM karaisal, and Fish Aminoacid**. A total of 70 students participated and a certificate was issued to all the participants. Students enjoyed preparing the organic fertilizer by understanding the scientific nuances and historical aspects and process up-gradation. Since being endogenic knowledge and preparation methods are imparted to the Indian community for the welfare of entrepreneurship development, self-reliance and dependence.

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 Coimbatore – 641 028

PG AND RESEARCH DEPARTMENT OF BIOTECHNOLOGY
 UNDER DBT STAR COLLEGE SCHEME SPONSERED
ENTREPRENEURSHIP TRAINING PROGRAMME ON
ORGANIC FERTILIZER PREPARATION FOR ORGANIC FARMING

Resource person

Dr. M. Murugan, Assistant Professor, Department of Botany, Sri Kaliswari College (Autonomous), Sivakasi, Virudhunagar, Tamilnadu-626 130

Date: 12.04.2022 Time: 10 AM to 4 PM Venue: UG LAB



The glimpse and Brochure of the event