



Institute of Forest Genetics and Tree Breeding Coimbatore



ABC of DNA

19- 20th October 2022

The Institute of Forest Genetics and Tree Breeding (IFGTB) is a pioneer institute in implementing biotechnology integrated tree breeding and forest conservation programs. To prime young minds and inculcate an interest in the world of biotechnology, IFGTB organized a two days training programme on “ABC of DNA” for school children studying in class 9th to 12th on 19 & 20th October 2022. Seventy-seven students of Class IX-XII from five schools of Coimbatore viz., Bharathi Matriculation Higher Secondary School, Chinmaya International Residential School, The PSBB Millennium School, Shri Nehru Vidyalaya Matriculation Higher Secondary School and SBOA Matriculation Higher Secondary School, participated in the training programme. The training helped students in grasping fundamental concepts in biotechnology in addition to exposure to state of art laboratories and interaction with scientists.



The inaugural session started with the welcome address by **Dr. Modhumita Dasgupta**, Head PBT&C Division, and an overview of the training programme by the Organizing secretary, **Dr. Mathish Nambiar-Veetil**, Scientist-G. This was followed by the inaugural address by **Dr. C. Kunhikannan**, Director, IFGTB. The Director gave a talk on **“Biosphere to DNA”** in which he highlighted the importance of forests, types of ecosystems, genetic diversity and the importance of studying DNA sequence variations. This was followed by a talk on **“Introduction to Biotechnology”** by **Dr. R. Yasodha**, Scientist- G & Group Coordinator (Research).



Inaugural Session talks by **Dr. C. Kunhikannan**, Director, and **Dr. R. Yasodha**, Scientist G & Group Coordinator (Research)



Talks by **Dr. Modhumita Dasgupta**, Scientist- G & Head, PBT&C and **Mrs. Muneera Parveen**, SPF, IFGTB

The inaugural session was followed by technical sessions. The topics of the talks included **“DNA: structure, packaging and replication”** by Mrs. Muneera Parveen, SPF, **“DNA fingerprinting, Barcoding, Diversity analysis”** by Dr. A. Shanthi, Scientist- E, **“NGS and Genomics”** by Dr. Modhumita Dasgupta, and **“Plant Tissue Culture and its applications”** by Mrs. Kalaiselvi, SRF. The talks on the second day were delivered by Mrs. Muneera Parveen, SPF, on **“Gene structure, expression and regulation: Central dogma, Lac operon”** and by Dr. Mathish Nambiar-Veetil, Scientist- G on **“Genetic Engineering- Principles, methods and application”**. The students also visited the following labs: **DNA Fingerprinting, Molecular Genetics and Genomics, Tissue culture, Genetic Transformation, Bioprospecting and Molecular Physiology and Biochemistry, Soil Science, Microscopy, Forest Protection, Vegetative Propagation Complex and Herbarium**. The students interacted with the scientists and research fellows of the labs which enabled them to obtain a range of practical knowledge and better understanding on new techniques and ongoing research activities of IFGTB.



Talks by Dr. Mathish Nambiar-Veetil, Scientist- G, IFGTB, and by Dr. A. Shanthi, Scientist- E, IFGTB



Lab Visits by Student participants

The valedictory session began with the glimpses of the training by **Dr. Mathish**, followed by an interactive session on "**Career opportunities in Biology**", in which the scientists and officers of IFGTB inspired the students by sharing their thought provoking educational and career experiences, and enlisted various career opportunities. The students then gave their feedbacks. They expressed that the training was very useful, and requested IFGTB to conduct more such trainings. This was followed by valedictory address by the Director, Dr. C. Kunhikannan. The Director informed that the overall feedback scores provided by the students was nearly 90 %, and complimented the organizers for their efforts for the successful conduct of the training programme. This was followed by distribution of certificates. The training programme concluded with a vote of thanks by Dr. A. Balasubramanian, Research Officer-I, IFGTB.



Interactive session with Scientists & Officers on "Career Opportunities in Biology"



Feedback on the training programme by student participants and Valedictory address by Dr. C. Kunhikannan, Director



Certificate distribution to participants by the Director, & Vote of thanks by Dr. A. Balasubramanian, Research Officer-I