

Collaborations/linkages for Field trip/research

REGIONAL RESEARCH INSTITUTIONAL VISIT AT JAWAHARLAL NEHRU TROPICAL BOTANIC GARDEN AND RESEARCH INSTITUTE (JNTBGRI), PALODE

We, MSc Botany students along with our Teachers Dr. Vilash V. and Dr. Latha Sadanandan started our Institutional visit on 9th August 2019 at 10 am in a bus named Uthradam. We reached the college on time and started our journey.

We reached JNTBGRI at 11.30 am. JNTBGRI was founded in 1979 with the objective of establishing a conservatory Botanic Garden of tropical plant resources in general and of the country and the Kerala state in particular. It also undertakes research programmes for the sustainable utilization of the resources. JNTBGRI is the only organization in India which maintains a 300 acre conservatory garden for the wild tropical plant Genetic resources of the country, besides a well integrated multidisciplinary R & D system dealing with the conservation, management and sustainable utilization of tropical plant resources. Dr. R. Prakashkumar is the Director of JNTBGRI.

At first we visited the Ethnomedicine and Ethnopharmacology Laboratory. The division of Ethnomedicine and Ethnopharmacology was established in the year 1992. The Head of the Division is Dr. S.R Suja. We had an effective interaction with Dr. Vinodkumar T.G Nair FNSE, Senior scientist and Mr. M. Navas FNSE, Technical Officer.

For the first time in the world IPR was granted to the Kani Tribe because of the endless effort taken by Dr. Pushpangadharan and Dr. Rajasekhar (Ethnomedicine and Ethnopharmacology). Next we moved to their laboratory. Dr. Rajeev, Assistant Professor NSS College, Nilamel, introduced the equipments and it's working principle. The equipments include Bio analyzer, Heamatology analyzer, Centrifuge, pH meter, AAS, ELISA plate recorder, Spectrophotometer, Rotavapor, Millipore unit, etc.

After leaving the lab we entered Phytochemistry and Phytopharmacological division. Head of this division is Dr. Sabulal. Our interaction was with Dr. Anil John J. (Technical officer). He explained about phytochemical analysis and screening of secondary metabolites. We got an idea on some sophisticated equipments like GC-FID & HPTLC. After his description on that particular equipment Ananthakrishnan R. and Lekshmi N. Menon (Ph D students) explained the chromatographic method and compound isolation. Then we had our lunch at 1'O clock.

After lunch we moved to Tissue Culture laboratory and entry was restricted to prevent contamination. It was the first commercial laboratory established for the production of *Anthurium*, *Dendrobium* (orchid) and *Musa*. We met Dr. Sreekumar, Senior Scientist JNTBGRI, whose class was highly interesting and effective. He explained tissue culture procedures along with Tissue culture bottles containing medium, callus, explant and newly emerging plant from callus. We cleared some doubts related to the tissue culture project work. Next we visited Biotechnology lab. On the way to the laboratory we visited the Animal House.

The main attraction of the Biotechnology laboratory was the DNA sequencing machine (Sanger's method). Dr. Siju familiarized the equipments and it's working principle. The main equipment was PCR, Gel documentation system, biospectrometer in DNA analysis, molecular marker technology etc. From there Vilash sir guided us to the Bamboo forest; World's Largest Bamboo species *Dendrocalamus giganteus* (Dragon bamboo).

We departed at 3.30 pm from JNTBGRI to college. It was a wonderful experience for us to visit JNTBGRI as part of the Institutional visit. It was an unforgettable day.

