



DEMPO CHARITIES TRUST'S
Dhempe College of Arts and Science, Panaji-Goa

DEPARTMENT OF BIOTECHNOLOGY

Report on International Conference on Recent Trends in DNA Forensics

A two-day International Conference on Recent Trends in DNA Forensics was jointly organized by the National Forensics Sciences University, Dharwad and Karnataka Institute of DNA Research, Dharwad on 29th and 30th November 2023 at National Forensics Sciences University, Dharwad-Karnataka to track the recent advances in DNA-Forensics.

A total of four students of FY BSc. Biotechnology of DCT's Dhempe College of Arts and Science participated in the conference, following are the students.

1. Mr. Kiran Burli (232715)
2. Mr. Siddhit S. Shenvi (232732)
3. Ms. Vaishnavi Mesta (232741) and
4. Ms. Samruddhi Biranje (232726).

- During the visit to Dharwad-Karnataka, we also visited some places related to Science, we visited the Regional Science Centre, Dharwad. It was a great experience to see the Science Centre located there. We got to learn many things related to Science, Nature, and Heritage and there were many exhibits which we could experience by playing with them by just clicking the button
- The Regional Science Centre, Dharwad-Karnataka.





Another place we visited was the Institute of AgriBiotechnology in the Agricultural Sciences University, Dharwad. Here we got to see the use of Biotechnology in Agricultural Sciences, we got a chance to see the Biosafety level-2 labs and it was a good experience to see the advance instruments used there



which were very new to us and got to know about it, we even interacted with the H.O.D of AgriBiotechnology and discussed with the Senior students how they work towards their projects and gained a good experience.



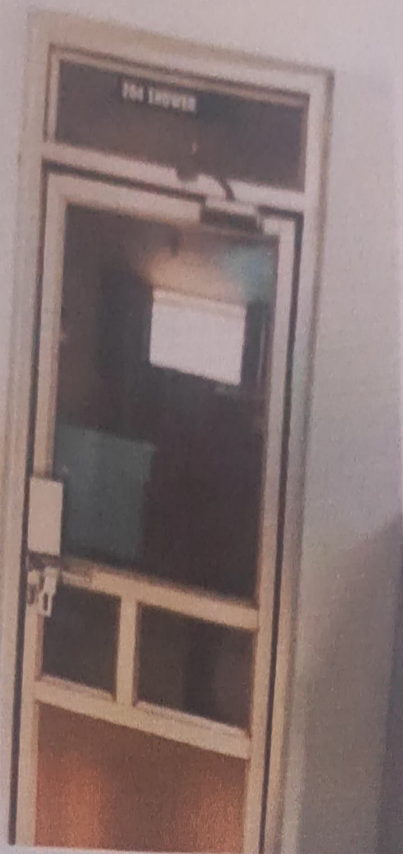
• Entrance of Institute of AgriBiotechnology.



A Microbiology Laboratory (BSL-2)



A separate cold storage room.

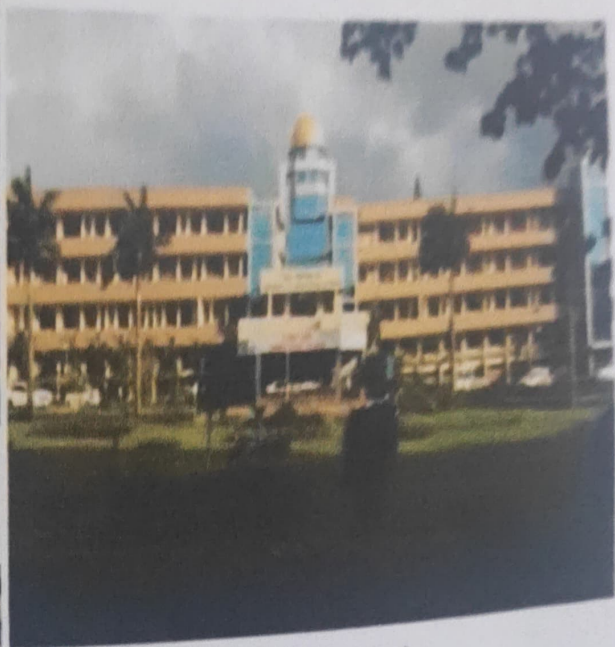


• A shower room.

On 29 November we were taken to the National Forensics Sciences University, Dharwad from the University of Agricultural Sciences, Dharwad (where we were given accommodation). Exactly at 10:45 the inaugural ceremony started it was the first time that this international conference was being held. The chief guest for the conference was Dr. V. N. Mathur - Former Director, of SFSL, Rajasthan, India. Dr. Pramod B. Gai - Director of KIDNAR was also present, the Conveyer and Campus director Prof. (Dr.) Manjunath Ghate and the organizing secretary Dr. Saroj P. Babar was present.

- University of Agricultural Sciences, Dharwad. Old Administrative Block.





• University of Agricultural Sciences, Dharwad. New Administrative Block.



• The NFSU Campus, Dharwad.

Soon after the inauguration of the Conference the technical session started, speakers from all over India and outside India were invited to deliver talks on various topics listed below.

Day-1

Technical Session

Address by Key Note Speaker

Dr. K. Thangaraj, Former Director, CDFD

Topic: DNA analysis for multifaceted applications: forensic, medico-legal and beyond

Dr. Anay Gaur, Incharge, Wild Life Forensics, La CONES, CCMB Hyderabad

Topic: Wild Life DNA Forensics

Dr. Smt. Ruwandi Ranasinghe, Scientist, Institute of Chemistry, Molecular Biology & Biotechnology, University of Colombo, Sri Lanka

Topic: The Application of Genetic Markers in Forensic Genetics: Insights from the Sri Lankan Context

Dr. V.N. Mathur, Former Director, SFSL Rajasthan

Topic: DNA Past, Present & Future

Shri. L. Parushothama, Assistant Director & Technical Manager, DNA Section, SFSL, Bangalore

Topic: Role of evidence materials for forensic DNA examination

Mark Perlin, Founder, Cyber Genetics, Pittsburgh, USA
(Online)

Day-2

Dr. Raju Panday, Scientific Officer,
National Forensic Science Laboratory, Nepal

Topic: Recent Trend in DNA Forensics in Nepal

Dr. Pramod B. Gai, Professor & Director, KIDNAR Dharwad,
Former Vice Chancellor, Karnatak University Dharwad

Topic: Application of Next-Generation Sequencing in DNA Forensics

Dr. S.S. Iyengar, Distinguished University Professor, Ryder
Professor & Director of Computer Science, Florida
International University, Miami, Florida USA

Topic: Unveiling the Illusions: Exploring the Intersection
of Stochastic Neural Networks and Deep Learning
in the Realm of Deepfake Generation

Dr. Prashanth R.G.
Senior Scientific Officer, Regional Forensic Science
Laboratory
Hubli, Karnataka, India

Topic: Application of X and Y STR Markers in Forensic
DNA Investigation

The talks delivered by the Scientist's was very interesting to listen as we got an opportunity to learn about DNA in more detail, and to associate it with the Forensics Sciences field application to counter the Criminals in crime through the techniques of DNA fingerprinting, use of X and Y chromosomal markers and Short Tandem Repeats (STR). The advances in technology and use of improved machines has increased the efficiency of good DNA-Profilng systems and their secure reporting on the Databases. We also came to know that there are new software developed to monitor the access of DNA data and ensure its safe for use of only to do something good towards the scientific community.

The talks brought before us how irresponsible are medical officers in sampling and transportation of samples collected from the crime scenes which has resulted in the deterioration of the DNA samples present. There are no proper documentation and storage practices involved which is a setback for the laboratories to investigate and draw an accurate DNA profile. Malpractices in preserving technique are carried out like storing the samples in formalin, formaldehyde, dilute acid or diluted alcohol, use of such acids slowly deteriorates the DNA. The Scientists advised that salt is the best preserving Material and the samples collected from the crime scenes should be preserved in salt rather than any acid



Photo with the Organizing secretary. Dr. Saroj P. Babar.

B. B. B.
Mr. Kiran B. B.
FYB.Sc Biotech
Student

R. Phadke
Mrs. Mrunal R. Phadke
Department In-charge

S. B. B.
Principal
Dempo Charities Trust
Shamra College of Arts & Science
Dharwad