



KONERU LAKSHMAIAH EDUCATION FOUNDATION

DEPARTMENT OF BIOTECHNOLOGY



INDUSTRIAL VISIT REPORT



Date of Industrial Visit: 18 February 2026

Faculty Mentors: Dr.G Siva Reddy-Assistant Professor

Dr.M Hemalatha-Assistant Professor

Dr. Uday Turaga - Assistant Professor



1. Introduction

An industrial and research visit was organized by the Department of Biotechnology, Koneru Lakshmaiah Education Foundation to the Centre for Cellular and Molecular Biology (CCMB) on 17 February 2026 for Y23 and Y24 B.Tech Biotechnology students.

The purpose of the visit was to expose students to advanced molecular biology research laboratories, genomics technologies, and modern biotechnology applications. Industrial and research institute visits help students understand how theoretical concepts learned in classrooms are applied in cutting-edge research and real-world biological problem solving.

2. Visit Details

- **Date of Visit:** 18/02/2026
- **Industry Visited:** CSIR-CCMB, Hyderabad, Telangana
- **Number of Students:** 110 (Y24 & Y23 batch, B.Tech Biotechnology)
- **Faculty Coordinators:**
 - **Dr. G. Siva Reddy- Assistant Professor**
 - **Dr. M. Hemalatha- Assistant Professor**
 - **Dr. Uday Turaga - Assistant Professor**
 - **Mrs. Y. Naga Lakshmi- Lab Technician**

3. Objective of the Visit

The industrial visit helped students to:

- To expose students to **advanced molecular biology research facilities.**
- To understand **genomics, cell biology, and biotechnology applications in research institutes.**
- To observe **modern analytical instruments used in biological research.**
- To interact with **scientists and researchers working in cutting-edge biotechnology fields.**
- To encourage students to explore **research careers and higher studies in biotechnology.**



4. About CSIR-CCMB Hyderabad

The Centre for Cellular and Molecular Biology (CCMB) is a premier research institute under the Council of Scientific and Industrial Research (CSIR). The institute is internationally recognized for its contributions to cellular biology, molecular genetics, genomics, and biotechnology research.

Major research areas at CCMB include:

- Molecular genetics and genomics
- Cell biology and structural biology
- Bioinformatics and computational biology
- Microbial biotechnology
- Human genetic diseases and molecular diagnostics
- Wildlife and biodiversity conservation genetics

CCMB is equipped with advanced research facilities such as:

- DNA sequencing and genomics laboratories
- Confocal microscopy and imaging systems
- Proteomics and structural biology platforms
- Cell culture and molecular biology laboratories
- Bioinformatics and computational biology facilities

5.1 Orientation Session

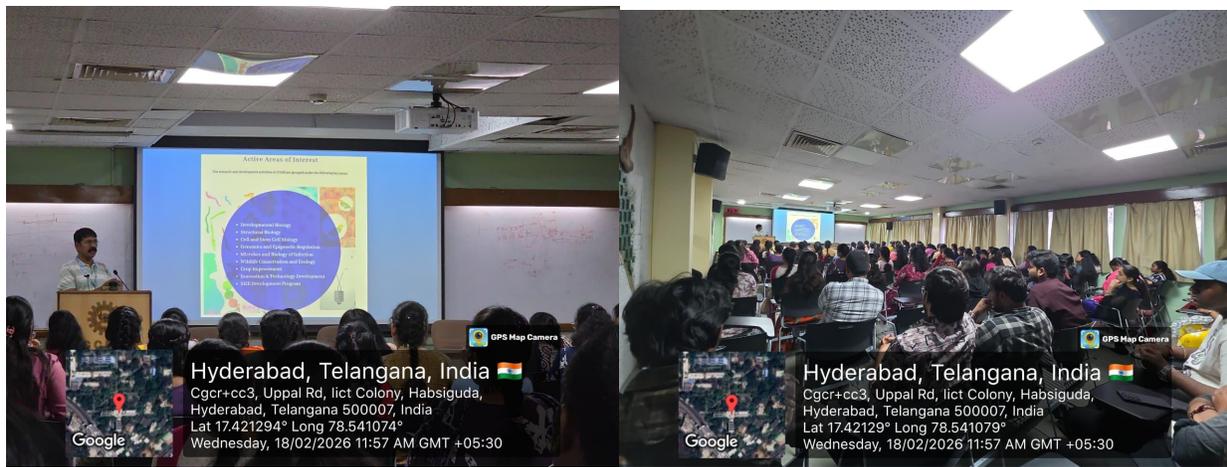
The visit began with an **orientation session** conducted by CCMB scientists. Students were introduced to the institute's **history, achievements, and significant contributions to molecular biology and genomics research.**

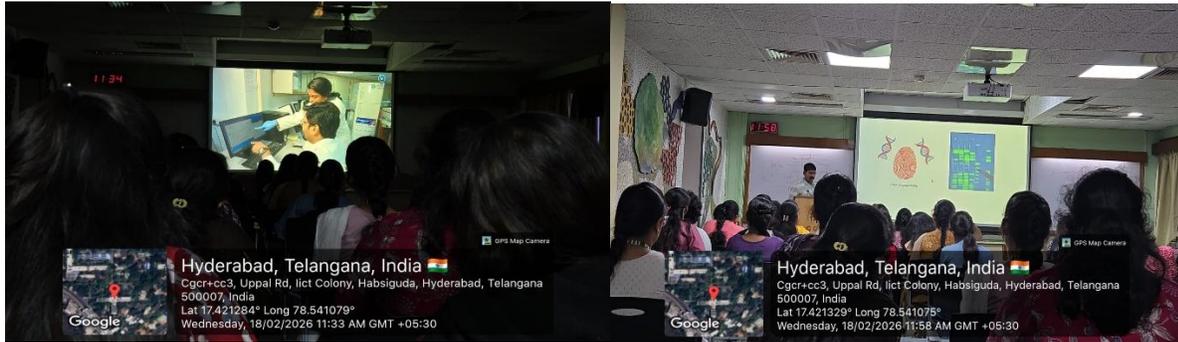
5.2 Laboratory Visits

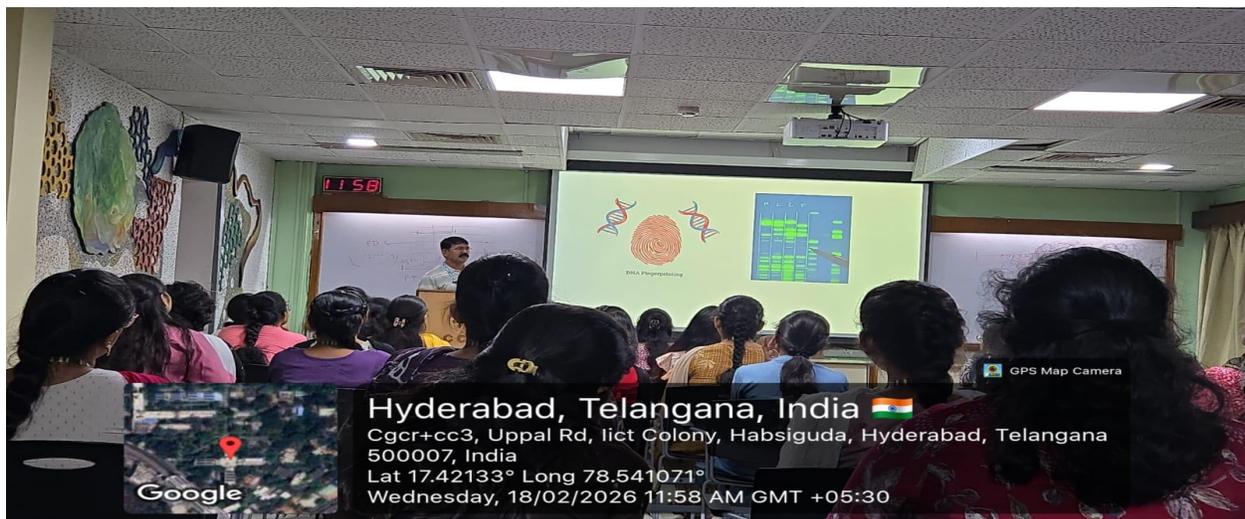
Students were guided through various research laboratories where they observed:

- Molecular biology laboratories
- DNA sequencing and genomics facilities
- Cell culture laboratories
- Advanced microscopy and imaging facilities

Scientists explained how these laboratories support **research in genetics, disease diagnosis, and biodiversity conservation.**







5.3 Demonstration of Research Instruments

Students observed demonstrations of several advanced instruments used in biotechnology research, including:

- PCR and DNA sequencing systems
- Confocal microscopy for cellular imaging
- Gel electrophoresis and molecular analysis systems



These technologies are widely used in **genomics, molecular diagnostics, and biotechnology research.**

5.4 Interaction with Scientists

Students interacted with researchers who discussed:

- Current research projects at CCMB
- Career opportunities in **biotechnology research institutes and laboratories**
- Opportunities for **higher education, research fellowships, and internships**

6. Learning Outcomes

The industrial visit enabled students to:

- Understand **modern molecular biology and genomics research techniques.**
- Gain exposure to **advanced research instrumentation and laboratory infrastructure.**
- Learn about **applications of biotechnology in medicine, agriculture, and environmental science.**
- Develop awareness about **research career opportunities and interdisciplinary scientific innovation.**
- Appreciate the importance of **genetic research in solving global biological challenges.**

7. Alignment with Sustainable Development Goals (SDGs)

The research activities at **Centre for Cellular and Molecular Biology** contribute to achieving several **United Nations Sustainable Development Goals (SDGs).**

SDG Number	SDG Goal	Relevance to Visit
SDG 2	Zero Hunger	Research in plant genetics and biotechnology helps develop

SDG Number	SDG Goal	Relevance to Visit
		improved crop varieties and supports food security.
SDG 9	Industry, Innovation and Infrastructure	Exposure to advanced research infrastructure and innovative biotechnology technologies.
SDG 12	Responsible Consumption and Production	Biotechnology research promotes sustainable use of biological resources and efficient production systems.
SDG 15	Life on Land	CCMB research supports biodiversity conservation and genetic analysis of endangered species.

8. Conclusion

The industrial visit to the **Centre for Cellular and Molecular Biology (CCMB), Hyderabad** was highly informative and inspiring for the **Y23 and Y24 Biotechnology students**. The visit provided valuable exposure to **state-of-the-art research laboratories, advanced molecular biology techniques, and real-world applications of biotechnology**.

The **Department of Biotechnology, K L E F** sincerely thanks the **scientists and staff of CCMB** for their guidance and support in making this educational visit successful. Such visits play an important role in enhancing students' **practical knowledge, research interest, and professional development in biotechnology**.