SHAHEED HIMAYUN MUZZAMIL MEMORIAL
GOVERNMENT DEGREE COLLEGE, ANANTNAG
DEPARTMENT OF BIOTECHNOLOGY

Sub-Tour Report: Educational Visit to the Division of Plant Biotechnology, SKUAST-Kashmir

Venue	Division of Plant Biotechnology, SKUAST-Kashmir
Date of Visit	21 September 2026
Class / Batch	B.Sc. Biotechnology, 3rd Semester (Batch 2025)
Number of Students	55
Faculty Members	Dr. Adfar Yousuf, Dr. Deepika Pandita, Dr. Shabir Ahmad, Ms. Madina

1. Introduction

An educational sub-tour was organised by the Department of Biotechnology, Shaheed Himayun Muzzamil Memorial Government Degree College, Anantnag, to the Division of Plant Biotechnology, SKUAST-Kashmir, on 21 September 2026. The visit was undertaken to provide students with first-hand exposure to modern biotechnological research and to enable them to observe how concepts studied in the classroom are applied within active research laboratories. Fifty-five students of B.Sc. Biotechnology, 3rd Semester, Batch 2025, participated in the visit under the guidance of four accompanying faculty members. The programme covered plant tissue culture, genome engineering, molecular farming, plant nutrition, genome editing, saffron research, DNA extraction and laboratory-based innovation.

2. Objectives

- To provide practical exposure to modern biotechnology research.
- To familiarise students with university-level research laboratories and equipment.
- To examine applications of biotechnology in plant science and agriculture.
- To observe techniques such as PCR, DNA extraction and plant tissue culture.
- To interact with scientists and gain insight into ongoing research.
- To connect theoretical classroom knowledge with its practical application.

3. Proceedings of the Visit

The students departed from the College at approximately 9:30 a.m. and, following a journey of about ninety minutes, arrived at the Division of Plant Biotechnology, SKUAST-Kashmir. An introductory session acquainted the group with the division, its researchers and its principal areas of research, after which the students were guided through a series of laboratories.

Under the guidance of Dr. Khalid Zaffar Masoodi, students were introduced to medicinal applications and therapeutic product development, including research on prostate cancer and health-related products such as "Magic Food" and "ProstGuard Blend," together with a discussion on innovation exemplified by an anti-cancer inhalation mask.



Fig. 1: Certificates and recognitions on the laboratory wall



Fig. 2: ProstGuard Blend, discussed during the interaction

In the laboratory of Dr. Sajad Majeed Zargar, students learned of research on common bean, rice and high-altitude plants, and of the significance of plant genetic resources to agriculture and medicine. Subsequent laboratories, under Dr. Amjad Masood Hussini and Dr. Mudasir Ah Mir, addressed genome engineering, plant tissue culture, plant nutrition and hormones, vertical farming, soil-less cultivation and molecular farming, along with a visit to controlled plant-growth facilities.



Fig. 3: Students during the laboratory interaction



Fig. 4: Laboratory storage and research facilities

The concluding interaction, led by Dr. Mudasir Ah Mir, addressed molecular farming, tissue culture, genome editing, hydroponics and microplastic research, with particular emphasis on saffron. Students were shown an Anti-Saffron Adulteration Kit and a Quick DNA Extraction Kit — both developed in-house as economical, practical alternatives to commercial equivalents — and were encouraged to cultivate scientific curiosity and problem-solving skills.

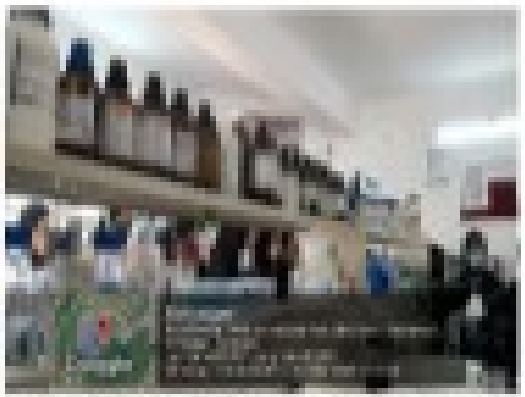


Fig. 5: Reagent shelves in the laboratory



Fig. 6: Quick DNA Extraction Kit shown to students

4. Laboratory Equipment Observed

4. Laboratory Equipment Observed

	A	B
1	 Fig. 7: Demonstration and interaction with students	 Fig. 8: PCR thermal cycler
2	 Fig. 9: Laboratory analytical instrument	 Fig. 10: Laminar air flow cabinet

5. Learning Outcomes and Conclusion

The visit afforded students valuable practical exposure across several domains of biotechnology, bridging theoretical concepts with active research and underscoring the interdisciplinary reach of the field into healthcare, product development, environmental research and locally relevant technologies. The demonstrations of the saffron adulteration kit and the quick DNA extraction kit were especially instructive in illustrating how scientific research can be translated into practical solutions, while interactions with researchers fostered a research-oriented mindset grounded in observation, innovation and problem-solving.

The educational visit to the Division of Plant Biotechnology, SKUAST-Kashmir, thus proved a valuable and enriching experience for the students of B.Sc. Biotechnology, 3rd Semester, offering first-hand exposure to modern research facilities and ongoing work in plant tissue culture, genome engineering, molecular farming, DNA extraction and saffron biotechnology. The Department of Biotechnology records its appreciation to the scientists and staff of SKUAST-Kashmir for a well-organised and academically enriching programme, and regards the visit as an effective complement to classroom instruction that is expected to encourage greater student interest in research and its wider applications.

6. Acknowledgement

The Department of Biotechnology, GDC Anantnag, sincerely thanks the authorities, scientists and researchers of SKUAST-Kashmir for their valuable time, guidance and demonstrations.

Head
Department of Biotechnology