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Report on Field Visit to the National Botanical Research Institute (NBRI), Lucknow, (24th February, 2025)

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A report on Field Visit

(24th February, 2025)

Organized by:

Faculty of Pharmacy, Integral University, Lucknow

A field visit to the **National Botanical Research Institute (NBRI), Lucknow**, was organized for **first-year D. Pharm students** to provide practical exposure to **Pharmacognosy**, a subject focused on medicinal drugs derived from natural sources. The visit aimed to enhance students' understanding of medicinal plants, their identification, cultivation, and their role in drug discovery and development. This hands-on learning experience served as a bridge between theoretical knowledge gained in classrooms and real-world applications in the field of pharmaceutical sciences.

Key Highlights of the Visit

The visit took place on **24th February 2025**, with **60 first-year D. Pharm students** accompanied by **four faculty members**. Upon arrival, the students were warmly welcomed by the staff of NBRI, who provided an overview of the day's schedule. The visit included a **guided tour of the botanical garden**, **interactive sessions with researchers**, and **demonstrations of plant preservation techniques**.

One of the most enriching aspects of the visit was the exploration of the **botanical garden at NBRI**, which houses a diverse collection of medicinal plants, including rare and endangered species. Students observed and studied various plants such as **Aloe vera (Aloe), Tulsi (Ocimum sanctum), Ashwagandha (Withania somnifera), Brahmi (Bacopa monnieri), and Sarpagandha (Rauvolfia serpentina)**. Each plant was accompanied by detailed information regarding its **botanical name, family, medicinal properties, and traditional uses**. Researchers explained the **importance of these plants in herbal medicine and modern pharmacology**, providing students with insights into how these natural resources contribute to drug development.

Additionally, students were introduced to **scientific techniques** involved in drug discovery from plant sources. Researchers demonstrated methods such as **chromatography, spectroscopy, and bioassays**, which are used in

the extraction, isolation, and characterization of bioactive compounds from medicinal plants. This session helped students understand the interdisciplinary nature of **Pharmacognosy**, which integrates **botany, chemistry, and pharmacology** to develop effective medicines.

Another crucial aspect of the visit was learning about **plant conservation and sustainability**. The researchers highlighted the threats posed by **overharvesting and habitat destruction** to medicinal plant species. Students were educated on **NBRI's conservation initiatives**, such as the use of **seed banks and tissue culture techniques** to preserve and propagate rare and endangered plant species. The demonstration of **tissue culture techniques** provided valuable insight into how biotechnology is used to safeguard medicinal plants that are difficult to cultivate through traditional means. The visit was in compliance with the SDGs **3,4,12** & **15 .**
The field visit proved to be a **valuable educational experience**, providing students with **practical knowledge and a deeper appreciation** for the significance of medicinal plants in pharmaceutical sciences.

Learning outcome of the visit

- **Practical Exposure to Medicinal Plants**
- **Understanding of Drug Development Processes**
- **Interdisciplinary Learning**
- **Awareness of Conservation and Sustainability**

The visit was conducted under the **supervision of Prof. Syed Misbahul Hasan (Dean, Faculty of Pharmacy), Prof. Juber Akhtar (Head of Department), and faculty members Dr. Manvi and Dr. Asad Jamal Ansari**, along with **supporting staff members Mr. Anjum Islam Beg and Ms. Shiva Awasthi**. The event was successfully coordinated by **Dr. Farogh Ahsan, Program Coordinator for the D.Pharm course**. This well-structured visit provided students with **firsthand exposure to medicinal plants, conservation strategies, and drug development techniques**, reinforcing **theoretical knowledge with real-world applications**. It also fostered an appreciation for **sustainability and the role of botanical research in pharmaceuticals**, making it a **highly impactful learning experience**.

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