



Report on Internship Training Program

organized by

**School of Studies in Biotechnology
Pt. Ravishankar Shukla University, Raipur**

in association with

**Alumni Association of Biotechnology
School of Studies in Biotechnology, Pt. Ravishankar Shukla University, Raipur**

A five-day internship program was organized by the School of Studies in Biotechnology, Pt. Ravishankar Shukla University, Raipur, in association with Alumni Association of Biotechnology, School of Studies in Biotechnology, Pt. Ravishankar Shukla University, Raipur from 30 June - 04 July 2025. The program aimed to enhance practical knowledge and technical skills in molecular techniques such as DNA isolation, SDS-PAGE, and restriction digestion, as well as the estimation of carbohydrates, reducing sugars, and proteins in biological samples. A total of 37 students participated in the program from Sant Guru Ghasidas Government College, Kurud, and Mata Karma Girls College, Mahasamund.

On the first day, all students were welcomed by the Head of the Department, Prof. Keshav Kant Sahu, and the Coordinator of the program, Dr. Nagendra Chandrawanshi. An overview of the five-day training schedule was provided, after which the interns were divided into groups, and each group was assigned a mentor. The first day focused on the estimation of carbohydrates and proteins using the Anthrone and Folin–Lowry methods, respectively. Dr. Jai Shankar Paul and Dr. Shubhra Tiwari, along with research scholars, discussed the experiments planned for the following days, explaining the concepts, procedures, and safety measures involved. On the second day, began with the molecular technique of DNA isolation from animal tissue (goat muscle) and plant tissue (banana leaves) using the CTAB method. On the third day, the restriction digestion experiment was conducted. The digested DNA, along with the previously isolated DNA from animal and plant tissues, were analyzed using gel electrophoresis. DNA bands were visualized using a Gel Documentation System, and quantification of DNA was performed using a UV spectrophotometer. Same day Prof. Sachchidanand

Shukla Vice Chancellor, of this University visited to the school and interacted with the interns. On the fourth day, during the first half, reagents for SDS-PAGE were prepared and used for protein molecular weight determination. Same day at 3:00 pm, all interns visited the Chemistry Laboratory of the School of Studies in Chemistry at Pt. Ravishankar Shukla University, Raipur. This lab was established under a project sponsored by DST-PURSE. Project assistants demonstrated the working of each instrument, and the principal investigators of the project interacted with the interns and provided valuable guidance for their future research goals.

On the final day of the internship, the SDS-PAGE experiment was completed. Dr. Jai Shankar Paul explained how to interpret the results of the experiment. Following this, multiple choice question based test was conducted to examine the student's knowledge gained during the internship tenure. The students then visited various laboratories in the School and observed sophisticated instruments such as PCR machines, spectrophotometers, incubators, rotary evaporators, microscopes, and others. At the end, students shared their feedback about the internship program. Certificates were distributed by the Head of the Department. Dr. Nagendra Kumar Chandrawanshi delivered the vote of thanks, expressing gratitude to all the individuals who contributed to the successful organization of the internship program.

Glimpses of the Internship Program

