

**Shri Shivaji Education Society Amravati's
Science College, Congress Nagar, Nagpur**

Department of Biotechnology

Session 2025-2026

Workshop on PCR Precision: Mastering RT-PCR Technique

Date: 19/08/2025 & 20/08/2025

The Viral Research and Diagnostic Laboratory (VRDL), AIIMS Nagpur organized a two-day hands-on training workshop on “*PCR Precision: Mastering RT-PCR Technique*” on 19th and 20th August 2025. The workshop was conducted under the guidance of Dr. Prashant P. Joshi (Executive Director & CEO, AIIMS Nagpur), Prof. Mrunal Pathak (Dean, Academics), Dr. Meena Mishra (Organizing Chairperson), Dr. Vishal Shete (Organizing Secretary), and Dr. Pooja Shendre (Co-Organizing Secretary). The main objective was to strengthen the knowledge and technical expertise of participants in molecular diagnostics, with a special focus on Polymerase Chain Reaction (PCR) and Real-Time PCR (RT-PCR) techniques.

The program included a mix of theoretical and practical sessions. Participants were introduced to the basic principles of PCR and RT-PCR, followed by hands-on training in RNA/DNA extraction. Practical sessions were conducted for setting up RT-PCR reactions including quantitative, qualitative, and allelic discrimination assays. Special emphasis was placed on troubleshooting and result interpretation, helping participants develop accuracy and confidence in molecular testing. The sessions were interactive, combining lectures with live demonstrations and guided laboratory exercises, ensuring effective learning outcomes.

Importantly, representatives from Science College, Congress Nagar, Nagpur also benefitted from this initiative. Ms. Sanchari Sarkar and Ms. Nupur Deshmukh from the Department of Microbiology, and Ms. Tripti Mazumdar from the Department of Biotechnology, participated in the workshop and successfully completed the training. Their active involvement in the sessions reflected the enthusiasm of young researchers to gain advanced laboratory skills and explore career opportunities in molecular biology and diagnostics.

Action Taken: The workshop provided participants with valuable exposure to advanced molecular techniques, enabling them to strengthen their laboratory skills in PCR and RT-PCR. The organizing committee ensured smooth execution through systematic arrangements, including laboratory setup, equipment calibration, and preparation of training materials. Participants engaged actively in all sessions, asked relevant queries, and practiced under expert supervision. Feedback was collected from attendees, certificates of participation were awarded, and the outcomes were documented for institutional records. The workshop proved highly beneficial as it not only enhanced participants' technical competency in molecular diagnostics but also inspired them to take up innovative research projects, thereby contributing to capacity building in biotechnology and applied life sciences.



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