

## Department of Biochemistry, Biotechnology & Bioinformatics

### Cross lab talk connect series

- **Date:** 04 August 2025
- **Time:** 2:00 PM
- **Venue:** Room No. 48
- **Organized by:** Association of the Department of Biochemistry, Biotechnology, and Bioinformatics
- **Topic:** *Antibody Drug Conjugate to Target CD79b in B Cell Malignancies*

**Chief Guest:** Dr. T. Pankajavalli

Senior Research Associate, Ohio State University Comprehensive Cancer Center,  
James Cancer Hospital & Solove Research Institute, Ohio, USA

**Ms. Carmalina A,** III B.Sc Biochemistry and Biotechnology, introduced the chief guest with great enthusiasm. She highlighted Dr. T. Pankajavalli's academic journey, her current role at Ohio State University, and her contributions to cancer research, particularly in the development of antibody-drug conjugates (ADCs). The introduction underscored the relevance of Dr. Pankajavalli's work to the students' curriculum and future research aspirations. Then Dr. T. Pankajavalli delivered a comprehensive and engaging lecture titled "*Antibody Drug Conjugate to Target CD79b in B Cell Malignancies.*" Her presentation was structured to provide both foundational knowledge and advanced insights into cancer biology and therapeutic innovation.

**Key Highlights of her presentation includes:** **Research Journey:** Dr. Pankajavalli shared her experiences working in Iyengar's and Muthusamy's labs, which shaped her transition from studying prokaryotic cells to cancer cell biology. **Cancer Focus:** She discussed Mantle Cell Lymphoma (MCL) and Chronic Lymphocytic Leukemia (CLL), explaining their pathology and current treatment approaches including chemotherapy, stem cell transplant, and TP53-targeted therapies. **Targeted Therapy:** The lecture explored the structure and function of CD19b and CD79b, explaining how these proteins serve as targets for antibody-drug conjugates. **Mechanism of ADCs:** She elaborated on how ADCs deliver cytotoxic agents directly to cancer cells, minimizing damage to healthy tissue and improving therapeutic outcomes. **Experimental Insights:** Dr. Pankajavalli presented her work on B-cell purification from patient blood samples and shared results from apoptosis assays conducted on B-CLL patient samples using mouse models. The lecture was highly interactive, with students and faculty posing thoughtful questions. Dr. Pankajavalli responded with detailed explanations, encouraging students to think critically and pursue research with curiosity and rigor. **Ms. Elakkiya,** III B.Sc Biochemistry and Biotechnology, delivered the vote of thanks. She expressed heartfelt appreciation to Dr. T. Pankajavalli for her inspiring lecture, to the faculty for their support, and to all attendees for their active participation. Her closing remarks reflected the collective gratitude of the department and reinforced the importance of such academic engagements. At the end of the session, the Q&A and summarized key takeaways

for the audience. The special lecture was a resounding success, offering students a rare opportunity to engage with a global expert in cancer research. It fostered intellectual curiosity, encouraged academic dialogue, and highlighted the importance of translational science in addressing real-world health challenges. The Association of the Department of Biochemistry, Biotechnology, and Bioinformatics looks forward to organizing more such events that bridge classroom learning with global scientific advancements.

