



**SANDIP**  
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**Report on Guest Lecture: "Design of Novel Drugs for Antimicrobial Resistance in TB by CADD"**

Date: January 23, 2025

Venue: Smart Classroom, SOPS, Sandip University

Guest Speaker: Dr. Akey Krishna Swaroop

Organizer: Dr. B. Nagaraju

Number of Participants: 83 Students

The School of Pharmaceutical Sciences (SOPS), Sandip University, successfully organized a guest lecture on **"Design of Novel Drugs for Antimicrobial Resistance in TB by CADD"** on January 23, 2025. The lecture was delivered by Dr. Akey Krishna Swaroop, a distinguished expert in Computer-Aided Drug Design (CADD) and antimicrobial research. The event was organized by **Dr. B. Nagaraju** and was attended by 83 students, along with faculty members and research scholars.

**Session Highlights**

Dr. Swaroop began by providing an overview of antimicrobial resistance (AMR) in tuberculosis (TB) and the urgent need for novel drug development. He explained how Computer-Aided Drug Design (CADD) is revolutionizing the process of identifying potential drug candidates with enhanced efficacy against multidrug-resistant (MDR-TB) and extensively drug-resistant tuberculosis (XDR-TB).

Key topics covered during the session included:

- ✓ Understanding Antimicrobial Resistance in Mycobacterium tuberculosis.
- ✓ Role of CADD in Drug Discovery: Molecular Docking, Virtual Screening, and Molecular Dynamics Simulations.
- ✓ Identification of Novel Drug Targets and Lead Optimization Strategies.
- ✓ Case Studies on New Drug Molecules Designed for TB Treatment.
- ✓ Challenges in Translating CADD-based Drug Candidates into Clinical Use.



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Dr. Swaroop emphasized the importance of computational approaches in modern drug discovery, highlighting how AI-driven predictive modeling and machine learning algorithms accelerate the identification of potential anti-TB compounds. He also discussed structure-based and ligand-based drug design approaches, providing real-time demonstrations of molecular docking studies.

**Student Engagement and Conclusion**

The session was highly interactive, with students engaging in discussions on:

The reliability of in silico drug screening compared to conventional experimental methods.

The role of big data and AI in optimizing drug candidates.

Future career opportunities in computational drug design and pharmaceutical research.

The event concluded with a vote of thanks by Dr. B. Nagaraju, who appreciated Dr. Swaroop's insightful presentation and encouraged students to explore CADD-based research in antimicrobial drug discovery.

Overall, the guest lecture provided an informative and engaging platform for students, equipping them with cutting-edge knowledge on the application of CADD in developing novel anti-TB therapies.





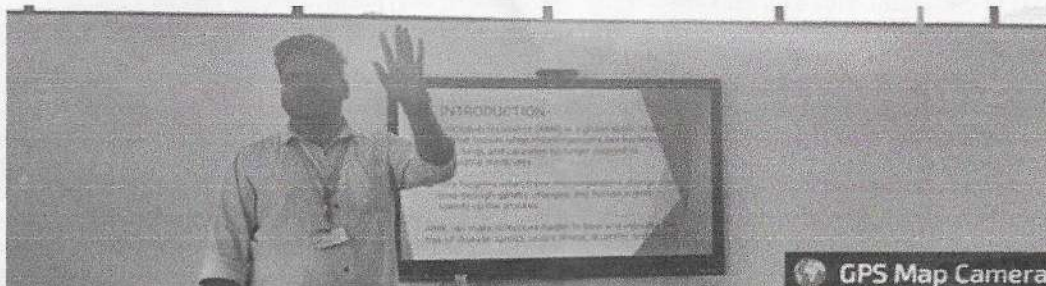
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**DEAN**  
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