

**Aarupadai Veedu Institute of Technology
Vinayaka Mission's Research Foundation**

Department of Biotechnology

AI -SUBMMIT -2026

**Report on Expert talk “AI-Driven Drug Discovery and Development: Concepts, Tools
and Research Applications” - 05.02.2026**

A expert talk on “AI-Driven Drug Discovery and Development: Concepts, Tools and Research Applications” was organized by department of Biotechnology in Association with IIC, AVIT with the objective of creating awareness about the transformative role of Artificial Intelligence (AI) in the pharmaceutical and biomedical research sectors. The session started with the welcome address given by Head of the department, Dr.Nirmala, Department of Biotechnology, she welcomed the resource person, Dr. S. Sridhar, Founder and CEO of Chandakka , faculty members and students, followed by guest introduction delivered by the student and there by the session was handed over to the resource person – Dr. S.Sridhar. The session highlighted how AI technologies are accelerating drug discovery processes, improving accuracy, reducing costs and enabling personalized medicine.

AVIT
AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY
Vinayaka Missions Chennai Campus

I-GAUGE
INSTITUTION'S INNOVATION COUNCIL
(Ministry of HRD Initiative)

Cordially invites you all to the MIC Driven Activity

**Atmanirbhar Bharat: HEI Pre-Summit Engagement
Towards India AI Impact Summit 2026**

Expert Talk on
**AI-Driven Drug Discovery and
Development: Concepts,
Tools and Research Applications**

Resource Person
Dr. S. Sridhar M.Sc., MTech., PhD, MBA (HRM)
Founder and CEO, Chandakka
Veppampattu, Chennai

05 February 2026
01:30 PM
Digital Classroom, AVIT

**VINAYAKA MISSION'S
RESEARCH FOUNDATION**
AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY
GIEC
CHANDAKKA INNOVATION AND
TECHNOLOGY RESEARCH CENTRE

Organized by IIC in association with Department of Biotechnology

Objectives of the Seminar

- To understand the fundamentals of Artificial Intelligence and Machine Learning in healthcare.
- To explore modern AI tools used in drug discovery and clinical research.
- To examine real-time applications and case studies in pharmaceutical development.
- To discuss ethical considerations and future prospects of AI in medicine.

Key Topics Covered

Overview of Artificial Intelligence in Healthcare

The seminar began with an introduction to AI, Machine Learning (ML) and Deep Learning concepts. The speaker explained how these technologies mimic human intelligence to analyze vast biomedical datasets and assist in decision-making.

AI in Drug Discovery Process

Traditional drug discovery is time-consuming and expensive. AI helps in:

- Target identification and validation
- Virtual screening of compounds
- Molecular modeling and simulation
- Predicting drug–target interactions
- Optimization of lead compounds
- Tools and Platforms Discussed
- Several AI-based platforms and software tools commonly used in research were introduced, such as:
 - Molecular docking and simulation tools
 - Predictive analytics software
 - Bioinformatics databases
 - AI-assisted clinical trial management systems

Research Applications and Case Studies

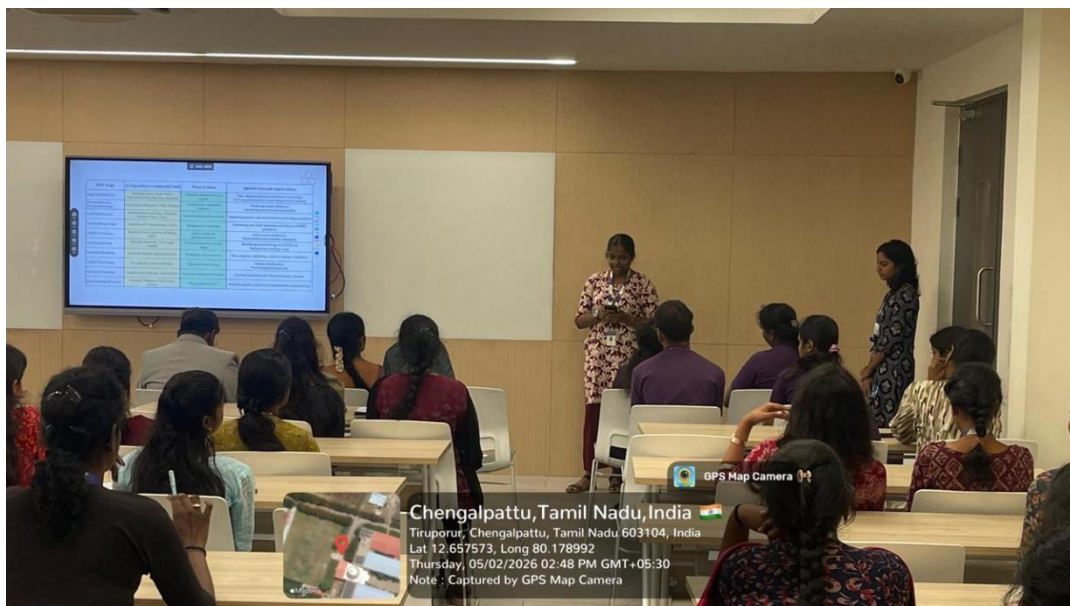
Real-world examples demonstrated how AI has contributed to rapid vaccine development, cancer drug research and rare disease treatment. The seminar emphasized how AI reduces experimental failures and enhances precision.

Ethical and Regulatory Considerations

The speaker addressed challenges such as data privacy, algorithm bias, transparency, and regulatory approval processes. Responsible and ethical use of AI in healthcare was strongly emphasized.

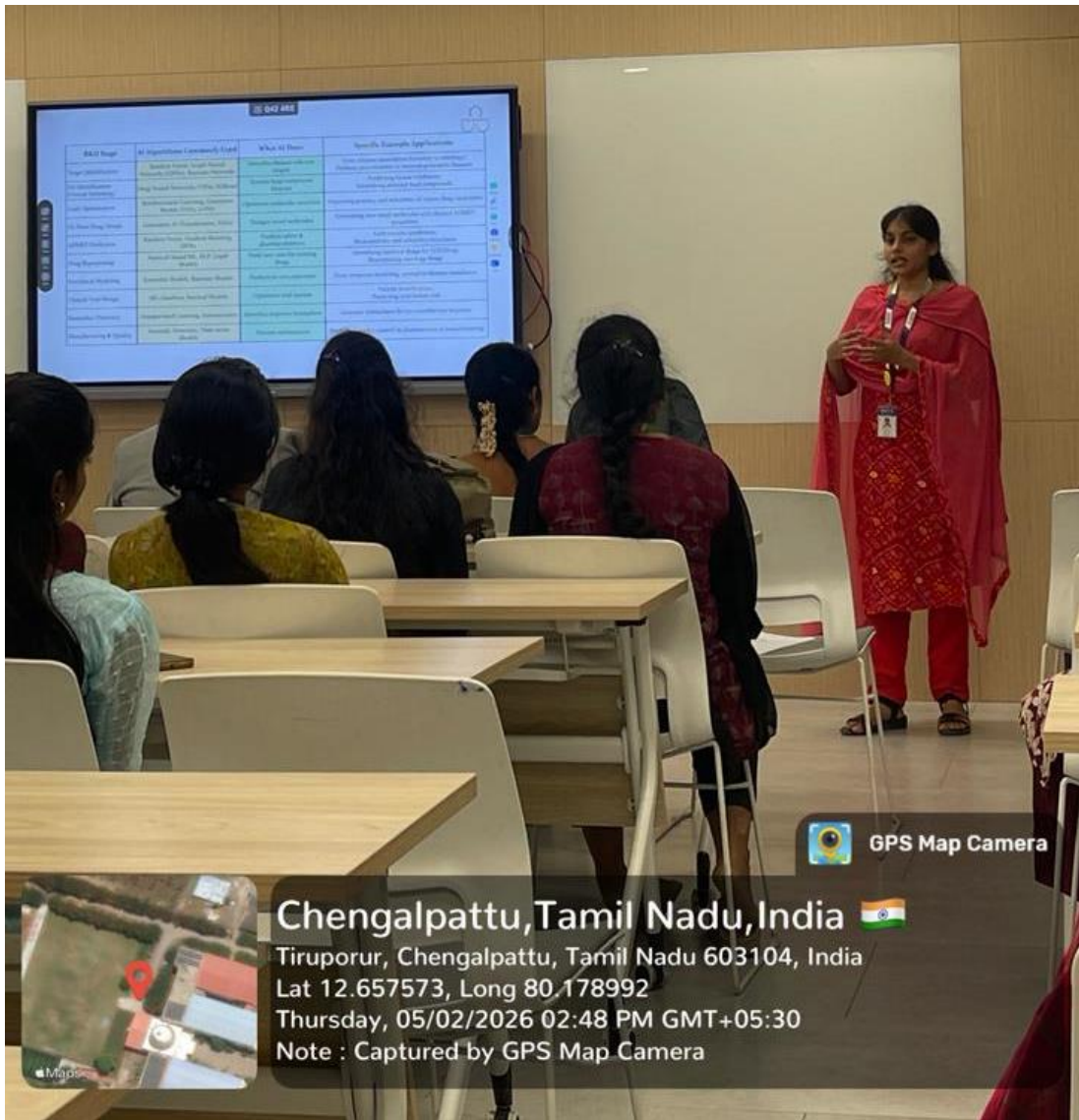
Benefits Highlighted

- Faster drug development cycles
- Cost reduction in R&D
- Improved prediction accuracy
- Enhanced personalized treatment approaches
- Efficient clinical trial management
- Challenges Discussed
- Data quality and availability
- Ethical and privacy concerns
- High initial investment in technology
- Need for interdisciplinary expertise





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The seminar provided comprehensive insights into how AI is revolutionizing drug discovery and development. Around 68 participants (from AVIT , Allied health science, Arts and Science)gained knowledge about emerging tools, research methodologies and the importance of ethical AI implementation. The session concluded that when AI used responsibly, holds immense potential to reshape the future of pharmaceutical research and healthcare innovation. The question raised by students and faculty was clarified by the expert. The session ended with vote of thanks by Ms.Janani, II year Biotechnology .