

Aarupadai Veedu Institute of Technology

Vinayaka Mission's Research Foundation

Department of Biotechnology

Seminar on **“Downstream Processing in Biotechnology: Purification and Characterization of Recombinant Proteins and Antibodies for Diagnostic Applications**

-13.8.2026



The poster is for a seminar at AVIT (Aarupadai Veedu Institute of Technology), Vinayaka Missions Chennai Campus. It features a portrait of Mr. Karthick Nagaraj, the resource person, on the left. The text on the right provides details about the seminar topic, date, time, and location. Logos for AVIT, Vinayaka Missions, and Diamond CS I-GAUGE are at the top. The background has a light blue gradient with faint DNA helix patterns.

AVIT
AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY
Vinayaka Missions Chennai Campus

DIAMOND
CS I-GAUGE
HIGHER EDUCATION

Cordially invites you all to the seminar on

**“Downstream Processing in Biotechnology:
Purification and Characterization of
Recombinant Proteins and Antibodies for Diagnostic
Applications”**

Resource Person
Mr. Karthick Nagaraj
Founder & MD
Invitro Biologicals Pvt Ltd
Chennai 600048.

13 August 2026

10.00 A.M. – 11.30 A.M.

Digital Classroom



**VINAYAKA MISSION'S
RESEARCH FOUNDATION**
(Licensed to be University under section 3 of the UGC Act 1956)
Chennai Campus



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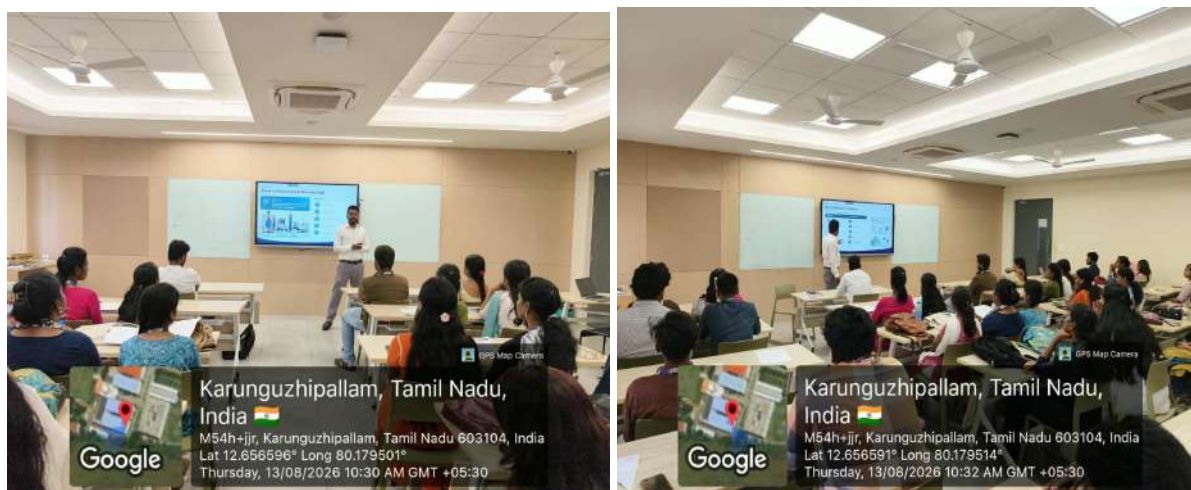
**Organized by
Department of Biotechnology**

Objectives of the seminar:

- ✓ To understand the fundamental concepts of downstream processing in biotechnology.
- ✓ To explore various techniques for the purification of recombinant proteins and antibodies.
- ✓ To discuss methods for the characterization of purified biomolecules for diagnostic purposes.

- ✓ To analyze the importance of downstream processing in ensuring the quality and efficacy of diagnostic agents.
- ✓ To examine case studies and recent advances in purification and characterization technologies.

A seminar on **“Downstream Processing in Biotechnology: Purification and Characterization of Recombinant Proteins and Antibodies for Diagnostic Applications”** was conducted on **13 August 2026** at the **Digital Classroom (TBT106), VMRF-AVIT Campus**, organized by the **Department of Biotechnology**. The session started with the welcome address given by Head of the department, Dr.Nirmala, Professor, Department of Biotechnology, she welcomed the resource person followed by guest introduction delivered by the student and there by the session was handed over to the resource person. The session was delivered by **Mr. Karthick Nagaraj, Founder and Managing Director of In Vitro Biologicals Pvt. Ltd.**, who provided valuable insights into the major stages of downstream processing, with particular emphasis on the purification and characterization of recombinant proteins and antibodies for in-vitro diagnostic applications.





During the seminar, the speaker explained the significance and various stages of downstream processing, including the **recovery, purification, concentration and characterization** of recombinant proteins and antibodies. Key purification techniques such as **filtration, centrifugation and chromatography** were discussed, along with analytical approaches used to evaluate protein purity, identity, molecular weight, stability and biological activity. The characterization of antibodies was also addressed, particularly with respect to their specificity, affinity, purity and functional performance.



Mr. Karthick Nagaraj also introduced the company's range of **in-vitro diagnostic products**, including immuno diagnostic kits, rapid diagnostic test kits and other laboratory diagnostic products. He explained their applications in disease detection and clinical testing, highlighting how purified and well-characterized recombinant proteins and antibodies serve as important components in diagnostic platforms such as **ELISA and rapid diagnostic tests**.



Overall, the seminar provided valuable exposure to the industrial aspects of downstream processing and demonstrated its importance in the development and production of reliable, high-quality biological products for diagnostic applications. The session enhanced our understanding of the practical application of biotechnology principles in the **purification, characterization and commercialization of diagnostic biomolecules**. The question raised by students and faculty was clarified by the expert. The session ended with vote of thanks by Dr.S.Senthil Kumar , Associate Professor , Department of Biotechnology, AVIT.