IMMUNE SYMPOSIA ON ADVANCED IMMUNE CELL ISOLATION, CHARACTERIZATION, AND SORTING USING BIGFOOT FLOW CYTOMETER

2nd - 3rd February 2026

Amrita Research Center Delhi NCR, Amrita Vishwa Vidyapeetham
In collaboration with
ThermoFisher Scientific

Proposed Theme Focus: This symposium will advance translational immunology by training clinical faculty, researchers and scholars in advanced flow cytometry platforms, specifically the Bigfoot Flow Cytometer, with emphasis on immune cell isolation, phenotypic characterization, and cell sorting for diagnostic, therapeutic, and vaccine development applications. The program aligns with ARCD vision of bridging fundamental discoveries with real-world clinical solutions by equipping participants with practical skills in state-of-the-art immunophenotyping and immune sorting technologies.

Objectives:
- To build expertise in advanced flow cytometry for immune cell characterization & isolation
- To develop research competency in multi-parametric immune profiling
- To establish pathways for regulatory compliance and clinical readiness

Hands-on Sessions Using Lab Infrastructure:
- Flow Cytometry: Cell phenotyping, immune profiling, and quality control
- Cell Sorting: Isolation of specific immune populations for downstream applications
- Data Analysis: Software-driven interpretation of multi-parametric datasets
- Protocol Development: Standardized pipelines for translational research

Patrons

Prof. Shantikumar V Nair
Associate Provost, Head and Dean
Amrita Research Center, Delhi NCR
Amrita Vishwa Vidyapeetham, Faridabad Campus

Prof. Amit Kumar Dinda
Research Director
Amrita Research Center, Delhi NCR
Amrita Vishwa Vidyapeetham, Faridabad Campus

Organization Secretary: Dr. Ashish Kumar Vyas

Organizing Team: Dr. Anubhav Pandey, Dr. Pankaj Jha, Dr. Sreeja Roy, Dr. Bhargab Kalita, Dr. Aparup Patra, Dr. Anuj Dilwaria, Dr. Ansar Fasaludeen and Mr. Vikas Jha

Registration Fee	₹1,000 + 18% GST (For Students) ₹2,000 + 18% GST (For Faculty)
Last Date of Registration	20th Jan 2026

Scan to Register

Scan to Pay

Send your application along with payment confirmation details to the Workshop Secretary and Administrative Manager.

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DAY 1: FOUNDATIONS & PRACTICAL APPLICATIONS IN IMMUNE CELL ISOLATION

Time	Program
8:30 AM - 9:30 AM	Registration

Session 1 - Inauguration

Time	Program
9:30 AM - 9:35 AM	Pooja Ceremony
9:35 AM - 9.50 AM	Welcome Address and Introduction of participants
9:50 AM - 10:00 AM	Overview of Symposium Objectives
10:00 AM - 10:30 AM	**Keynote:** From Immune Discovery to Diagnostic Innovation – Role of Advanced Flow Cytometry
10:30 AM - 10:45 AM	**Tea Break**

Session 2 - Flow Cytometry in Translational Immunology

Time	Program
10:45 AM - 11:15 AM	Immunophenotyping with Bigfoot Flow Cytometer: Multi-Parameter Panel Design
11:15 AM - 11:45 AM	Advanced Immune Cell Isolation Techniques: Principles and Best Practices
11:45 AM - 12:15 PM	Flow Cytometry in Clinical Diagnostics: Disease Monitoring and Biomarker Discovery
12:15 PM - 01:00 PM	Panel Discussion
01:00 PM - 02:00 PM	**Lunch**

Lab Session 1 (Groups A & B Rotate)

Time	Program
02:00 PM - 03:30 PM	Lab 1A (Group A): Introduction to Bigfoot Flow Cytometer– Instrumentation, Compensation & Panel Design
	Lab 1B (Group B): Immune Cell Isolation Techniques – Magnetic Bead Separation & Density Gradient Protocols
03:30 PM - 03:45 PM	**Tea Break**
03:45 PM - 05:15 PM	Hands-on Rotation (Switch A & B)

Day 1 – Hands-on Sessions

Lab 1A: Introduction to Bigfoot Flow Cytometer – Instrumentation, Compensation & Panel Design

- Instrument orientation and software navigation
- Voltage optimization and compensation strategies
- Antibody panel design for multi-parametric analysis
- Quality control (QC) checks and standardization protocols

Lab 1B: Immune Cell Isolation Techniques

- Magnetic bead-based isolation (negative & positive selection)
- Density gradient centrifugation for peripheral blood mononuclear cell (PBMC) isolation
- Purity assessment and viability testing
- Protocol troubleshooting and optimization

DAY 2: TRANSLATIONAL READINESS, IMMUNE CELL SORTING & ADVANCED APPLICATIONS

Time	Program
Session 3- Advanced Analysis & Clinical Translation	
9:30 AM - 10:00 AM	Immune Profiling in Vaccine Research: Monitoring Immune Responses
10:00 AM - 10:30 AM	Quality Control, Standardization, and Regulatory Pathways in Flow Cytometry
10:30 AM - 10:45 AM	Panel Discussion
10:45 AM - 11:00 AM	**Tea Break**
11:00 AM - 11:30 AM	Investment Scenarios and Grant Opportunities for Translational Immunology
11:30 AM - 12:00 PM	Panel Discussion: Academia-Industry Collaborations for Immune Cell Technology Deployment
12:00 PM - 01:00 PM	Live Training on Flow Data Analysis using FlowJO Software
01:00 PM - 02:00 PM	**Lunch**
Lab Session 2 (Groups A & B Rotate)	
02:00 PM - 03:15 PM	Lab 2A (Group A): Advanced Flow Cytometry – Multi-Parametric Immune Subset Profiling & Data Analysis
	Lab 2B (Group B): Fluorescence-Activated Cell Sorting (FACS) – Isolation of Specific Immune Populations
03:15 PM - 03:30 PM	**Tea Break**
03:30 PM - 04:45 PM	Hands-on Rotation (Switch A & B)
04:45 PM - 05:30 PM	Closing Ceremony –Feedback, & Group Photo, Closing Remarks, and Certificate Distribution

DAY 2: TRANSLATIONAL READINESS, IMMUNE CELL SORTING & ADVANCED APPLICATIONS

Day 2 – Hands-on Sessions

Participants will engage in structured, small-group practical sessions designed for experiential learning and competency building:

Lab 2A: Advanced Flow Cytometry – Multi-Parametric Immune Subset Profiling & Data Analysis

- Gating strategies for immune cell identification (T cells, B cells, and NK cells)
- Fluorescent compensation and spillover correction.
- Bigfoot software tools for data visualization and statistical analysis Analysis of disease-specific immune phenotypes

Lab 2B: Fluorescence-Activated Cell Sorting (FACS) – Isolation of Specific Immune Populations

- Cell sorting principles and instrument setup
- Purity and recovery optimization
- Downstream applications (RNA extraction, functional assays, culture)
- Safety protocols and ethical considerations

Participant Division: Participants will be divided into **two groups (A & B)** and will rotate between lab stations on both days to ensure equal exposure and comprehensive learning.

Target Participants:

- Early-career researchers, clinicians, and PhD scholars in biomedical sciences.
- Translational research teams from academia and industry.

Expected Outcomes:

- Basic Understanding of Immune Cell Profiling and Sorting
- Translational Research Competency in Immunology
- Hands-On Technical Proficiency and Analytical Skills

Support requirements:

- Logistical support for travel and accommodation of invited faculty
- Funding for workshop materials, antibodies, and reagents
- Technical support from ThermoFisher Scientific for instrument and software assistance
- Promotion through academic networks and institutional platforms
- Administrative support for participant registration and documentation