

REPORT ON INVITED TALK

Topic: Cancer Immunotherapy

Date: 31 July 2026

Venue: Seminar Hall (Room No. 6)

SDG Addressed

- ❖ SDG 3: Good Health and Well-being
- ❖ SDG 4: Quality Education
- ❖ SDG 9: Industry, Innovation and Infrastructure.

Greetings to All,

The **School of Biological Sciences**, in association with the **Internal Quality Assessment Cell (IQAC)**, **Mohamed Sathak College of Arts and Science, Sholinganallur**, successfully organized an **Invited Talk on "Cancer Immunotherapy"** on **31 July 2026**. The programme was conducted with the objective of introducing students and faculty members to the fundamentals of cancer immunology and recent advances in cancer immunotherapy. The session provided valuable insights into the mechanisms of the immune system in combating cancer, the principles of immunoregulation, and emerging therapeutic approaches that are transforming cancer treatment. A total of **95 students** and **30 faculty members** actively participated in the programme, making the event highly interactive, informative, and successful. The programme served as an excellent platform for enhancing scientific knowledge and encouraging participants to explore the rapidly evolving field of cancer immunotherapy and its applications in modern healthcare.

The programme commenced with the recitation of the **Holy Qirath** by **Ms. S. Salma Begam, II B.Sc. Biotechnology**, followed by the **Tamil Thai Vazhthu**. The gathering was warmly welcomed by **Dr. A. Vaishnavi, Assistant Professor, PG & Research Department of Biotechnology**, who emphasized the growing significance of cancer immunotherapy in modern biomedical research and clinical practice. She highlighted the importance of understanding advanced therapeutic strategies that are revolutionizing cancer management and encouraged students to actively engage with emerging developments in life sciences.



The programme was presided over by **Dr. M. S. Mohamed Jaabir, Principal**, who felicitated the gathering and formally introduced the resource person, **Mr. Mohamed Yasar, Ph.D. Scholar, Department of Clinical Hematology, Christian Medical College (CMC), Vellore**. In his introductory remarks, the Principal highlighted the academic achievements and research contributions of the speaker in the field of stem cell biology and cancer immunotherapy. He emphasized the importance of integrating cutting-edge biomedical research with higher education and encouraged students to pursue research careers in translational medicine and immunology. The resource person was subsequently honoured by the **Dr. M. S. Mohamed Jaabir, Principal & Dr. M. Syed Ali, Vice-Principal & IQAC Coordinator**, and the organizing department as a token of appreciation for accepting the invitation and sharing his expertise.



The invited talk was delivered by **Mr. Mohamed Yasar**, who presented a comprehensive overview of **immunology and cancer immunotherapy**. He began by explaining the fundamental concepts of the human immune system, including innate and adaptive immunity, the role of immune cells in recognizing pathogens and abnormal cells, and the mechanisms by which the immune system distinguishes healthy tissues from cancerous cells. The session provided participants with a strong conceptual foundation in immunology before progressing to advanced topics in cancer therapy.

The speaker elaborated on the concept of **immune checkpoints** and their crucial role in maintaining immune homeostasis and preventing autoimmune disorders. He explained the mechanisms of immune checkpoint molecules such as PD-1, PD-L1, and CTLA-4, describing how cancer cells exploit these regulatory pathways to evade immune surveillance. The discussion highlighted how immune checkpoint inhibition has emerged as one of the most significant breakthroughs in modern oncology by restoring the immune system's ability to recognize and eliminate tumour cells.



One of the major highlights of the session was the discussion on **CAR-T (Chimeric Antigen Receptor T-cell) therapy**, one of the most revolutionary advances in personalized cancer treatment. The resource person presented the inspiring clinical story of **Emily Whitehead**, the first pediatric patient to achieve long-term remission from refractory acute lymphoblastic leukemia through CAR-T cell therapy. He explained how genetically engineered T cells are designed to specifically recognize tumour antigens, enabling targeted destruction of malignant cells. This real-life example effectively demonstrated the remarkable potential of immunotherapy in treating previously incurable hematological malignancies and illustrated how translational research has transformed patient care.

The speaker further discussed the various **modalities of cancer immunotherapy**, including monoclonal antibody therapy, immune checkpoint inhibitors, CAR-T cell therapy, cancer vaccines, cytokine-based therapies, tumour-infiltrating lymphocyte therapy, and other emerging immunotherapeutic strategies. The advantages, clinical applications, limitations, and ongoing research associated with each therapeutic approach were explained with relevant examples. Participants gained valuable knowledge regarding how these therapies differ from conventional chemotherapy and radiotherapy by specifically enhancing the body's immune response against cancer cells while minimizing damage to normal tissues.

The session also addressed the current challenges in cancer immunotherapy, including tumour heterogeneity, immune resistance, adverse immune-related effects, accessibility, and treatment costs. The resource person emphasized that continuous research and interdisciplinary collaboration are essential for improving therapeutic outcomes and expanding the application of immunotherapy to a wider range of cancers. Students were encouraged to explore careers in immunology, molecular biology, clinical research, and translational medicine, where significant opportunities exist for scientific innovation.

An engaging **question-and-answer session** followed the lecture, during which students and faculty members actively interacted with the resource person. Participants raised thoughtful questions regarding immune checkpoint inhibitors, CAR-T therapy, personalized medicine, current clinical trials, treatment affordability, and future research directions. The speaker responded with detailed explanations supported by clinical examples, making the interaction highly educational and inspiring.



Overall, the invited talk significantly enhanced the participants' understanding of cancer immunology and modern immunotherapeutic strategies. The programme successfully bridged the gap between fundamental immunological concepts and their clinical applications in cancer treatment. The knowledge shared during the session motivated students to strengthen their understanding of emerging biomedical technologies, pursue research in cancer biology and immunology, and appreciate the growing role of precision medicine in improving patient outcomes.

The programme concluded with a heartfelt **Vote of Thanks** delivered by **Ms. K. Priyatharcini**, Assistant Professor, PG & Research Department of Biotechnology, who expressed sincere gratitude to the Management, the Principal **Dr. M. S. Mohamed Jaabir**, **Dr. M. Syed Ali**, Vice-Principal & IQAC Coordinator, the distinguished resource person **Mr. Mohamed Yasar**, the organizing committee, faculty members, non-teaching staff, and all the participants for their enthusiastic cooperation and contribution to the grand success of the programme. The event concluded with the **National Anthem**, leaving the participants inspired to explore the rapidly advancing field of cancer immunotherapy.

Thank You.

Dr. M. Syed Ali
Vice-Principal & Head,
PG & Research Department of Biotechnology,
Mohamed Sathak College of Arts and Science.