

Press Release

JMI Researcher wins inaugural Carl June CAR- TCR Summit Travel Award for groundbreaking CAR T Cell Research

Ms. Areej Akhtar, a Ph.D. research scholar at the Multidisciplinary Centre for Advanced Research and Studies (MCARS), Jamia Millia Islamia (JMI) has been honored with the first-ever Carl June CAR-TCR Summit travel award at the prestigious event held in Boston, Massachusetts, USA. The award, presented by Dr. Carl June himself, the pioneer in the field of CAR T cell therapy, recognizes her groundbreaking research in enhancing the efficacy of CAR T cell therapy. Ms. Akhtar's work, titled "Bioengineering the Metabolic Network of CAR T-Cells to Increase Persistence and Long-Term Anti-Tumor Activity," addresses critical challenges in the field of CAR T cell therapy.

Ms. Akhtar's research highlights the need for metabolic reprogramming to improve the persistence and long-term effectiveness of these "living drugs," which have revolutionized cancer treatment since the FDA approved the first CAR T cell therapies in 2017. More than 35,000 patients worldwide have benefited from this treatment, which remains effective even in cases where other therapies, such as chemotherapy and immunotherapy, have failed. Her teams' innovative research aims to tackle the longevity of CAR T-cells by bioengineering the metabolic pathways of CAR T cells using GLP-1 peptide, increasing their lifespan and anti-tumor activity.

Ms. Akhtar screened over 3,000 different combinations of molecules to find the one that enhances CAR T cell function and extends their longevity, Ms. Akhtar said during the award ceremony, "Our team has successfully identified a unique combination that works remarkably well, both in patient samples and pre-clinical models". CAR T cell therapy is known for its high costs, ranging between ₹4 to ₹5 crore. Ms. Akhtar emphasized her goal to make this life-saving therapy more affordable and accessible to patients worldwide. The bioengineering innovation behind Ms. Akhtar's research has been patented, with both Ms. Areej Akhtar and Dr. Tanveer Ahmad, Assistant Professor at MCARS, JMI, listed as the inventors. The work is currently under peer review for publication and is expected to make a significant impact in the field of cancer treatment.

Prof. Mohammad Husain, Director of MCARS, congratulated Ms. Areej Akhtar on receiving the award and praised her research efforts. "Research scholars at Jamia Millia Islamia are doing excellent work, and they are gaining recognition worldwide for their contributions. Scholars like Ms. Areej Akhtar are an asset to the university, and they have proven through their research journey that they can conduct world-class research and make the country proud," said Professor Husain. This achievement not only marks a major milestone in Ms. Akhtar's career but also reinforces the commitment of JMI to cutting-edge research that has the potential to transform healthcare on a global scale.

Public Relations Officer
Jamia Millia Islamia



Ms. Areej Akhtar (PhD Scholar, MCARS, Jamia Millia Islamia)