Asian Transplantation Week 2023

Nov. 15(Wed)~18(Sat), 2023
Conrad Seoul, Korea

Submission No.: CS05-7758
Session : Concurrent Symposium 5 (Basic)
Date & Time, Place : November 17 (Fri), 15:10-16:40, Room 5F-2
Session Title : Mechanisms and biomarkers of immune tolerance

Regulatory T cell subpopulations and immune tolerance

Eui-Cheol Shin
KAIST, Republic of Korea

$CD4^+CD25^+FOXP3^+$ regulatory T (Treg) cells are important for the regulation of the immune response. They contribute to maintenance of immune homeostasis by suppressing excessive immune responses, and their dysregulation is involved in various human diseases, including autoimmune diseases, allergy, and cancer. They also contribute to immune tolerance in transplantation settings. In humans, $CD4^+CD25^+FOXP3^+$ T cells can be classified into three distinct subpopulations based on the expression of CD45RA and FOXP3: $CD45RA^+FOXP3^{lo}$ resting Treg cells, $CD45RA^-FOXP3^{hi}$ activated Treg cells and $CD45RA^-FOXP3^{lo}$ cytokine-secreting non-suppressive cells. In this lecture, cellular and molecular characteristics of Treg subpopulations and their roles in immune tolerance will be discussed.