

Submission No. : KT01-0003

Session Title : Kidney Transplantation 1

Session Topic : Advances in Diagnostics and Treatment in Kidney Transplantation

Date & Time, Place : June 14 (Fri) / 10:30-12:00 / Room 5 (202)

Cellular Therapies in kidney Transplantation

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Cellular therapies in transplantation have focused predominantly on the development of tolerance. There are two major strategies, the first is the induction of mixed chimerism using various forms of donor stem cell infusion/ bone marrow transplant combined with host immunosuppression to achieve temporary or permanent chimerism. The second is the use of regulatory cell subsets to allow the reduction of immunosuppression best exemplified by the One Study. More recently the development of CAR T cells has provided a strategy for transplant directed Tregs or cytotoxic T cells directed against pathogenic cell subsets. Many of these promising preclinical strategies are now entering clinical testing. This talk will review mixed chimerism and regulatory cell strategies and the current state of cellular therapies in kidney transplantation.

Keywords: Tregs, Chimerism, Kidney , Transplantation , Tolerance