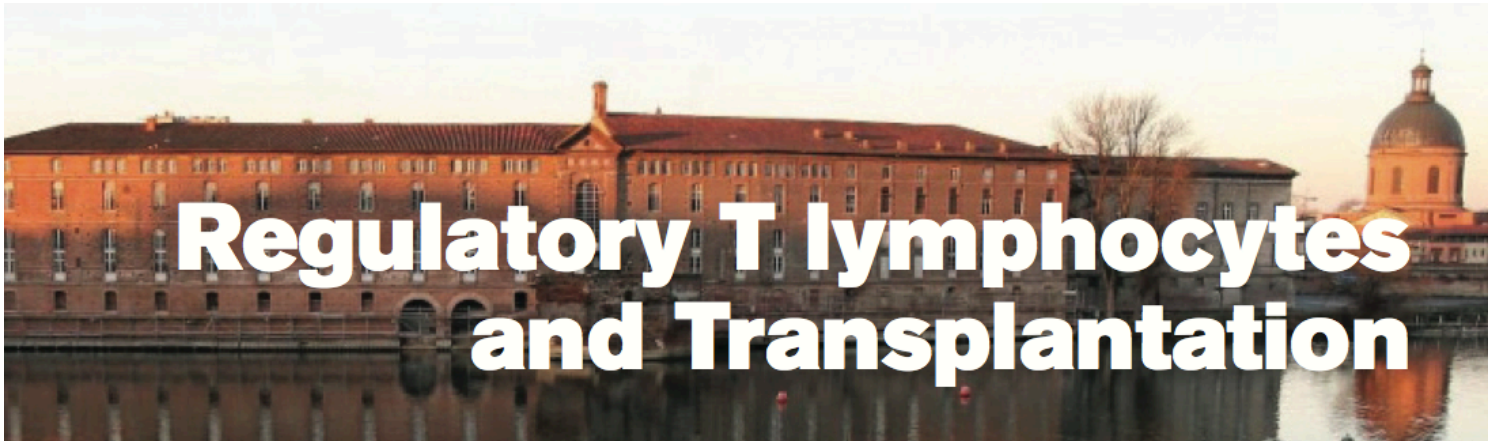

Continuous TCR signaling is required for maintaining regulatory CD4 T-cell numbers and suppressive capacities in the periphery

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In young mice, peripheral Treg cells can be subdivided into two subsets according to Ly-6C expression. Phenotypic analysis, imaging and adoptive transfer experiments of peripheral Ly-6C$^-$ and Ly-6C$^+$ Treg cells reveal that the non-expression of Ly-6C by about 70% of peripheral Treg cells is dependent on TCR signaling. Interestingly, Ly-6C$^-$ Treg cells express higher surface amounts of key immunosuppressive molecules such as CD25, CTLA-4, CD39 and CD73 than Ly-6C$^+$ Treg cells and are the only ones to produce constitutively anti-inflammatory cytokines. In line with their phenotype, only Ly-6C$^-$ Treg cells display suppressive capacities both *in vitro* and *in vivo*. Finally, whereas Ly-6C$^-$ Treg cells maintain their numbers with age, Ly-6C$^+$ Treg cells gradually disappear. Altogether, our recent data strongly suggest that both the survival and suppressive functions of CD4 Treg cells rely on their ability to receive continuous TCR signaling in the periphery.