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Transcriptional regulation of helper T cell specification

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CD4⁺ T lymphocytes play important regulatory roles in the adaptive immunity. Upon activation, naïve CD4⁺ helper T (TH) cells differentiate into effector subsets with different cytokine expression profiles and immune regulatory function. Effector TH cells have been classified into TH1 and TH2 lineages: TH1 cells express IFN γ , and TH2 cells produce IL-4, -5 and -13. Previously, we analyzed the roles of extracellular signals, via ICOS costimulatory receptor and IL-17RB (a receptor for IL-25 cytokine), in TH2 differentiation. We have recently identified Dec2 transcription factor, selectively expressed in TH2 cells and regulated by ICOS and IL-25, as a regulator of early TH2 differentiation by binding to JunB and GATA3 genes. In addition, our studies have illustrated a critical role of Bcl6 in programming of T follicular helper (Tfh) cell development. These topics will be discussed in this meeting.

References:

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