Nurieva Roza Insafetdinovna et al., J Clin Cell Immunol 2015, 6:5
http://dx.doi.org/10.4172/2155-9899.C1.024

OMICS International
conferenceseries.com

4th International Conference and Exhibition on
Immunology
September 28-30, 2015 Crowne Plaza Houston River Oaks, Houston, TX, USA

BATF is essential for IL-4 expression in T follicular helper cells

Nurieva Roza Insafetdinovna, Anupama Sahoo and Andrei Alekseev
University of Texas MD Anderson Cancer Center, USA

A part from T helper (Th)-2 cells, T follicular helper (Tfh) cells are a major class of IL-4 producing T cells, required for regulation of type 2 humoral immunity. Although the transcriptional control of IL-4 has been an area of extensive investigation, the precise regulation mechanism of IL-4 production in Tfh cells remains mainly unknown. In the current study, we found that the transcription factor BATF, a member of the AP-1/Jun family is essential for IL-4 expression in Tfh cells rather than in canonical Th2 cells. Functionally, BATF in cooperation with Interferon regulatory factor (IRF) 4 along with Stat3 and Stat6 trigger IL-4 production in Tfh cells by directly binding to and activation of the CNS2 region in the IL-4 locus. In addition, Batf-to-c-Maf signaling is an important determinant of IL-4 expression in Tfh cells. *BATF* deficiency impairs the generation of IL-4 producing Tfh cells that results in protection against allergic asthma. IL-4 acts as an autocrine factor in controlling *BATF*-mediated IL-4 expression in Tfh cells. Our results thus indicate a critical role of *BATF* in promoting the generation of pro-allergic IL-4 producing Tfh cells.

Biography

Nurieva Roza Insafetdinovna has completed her PhD from Pushchino State University, Russia and Post-doctoral studies from University of Washington, Seattle, USA. Currently, she is the Assistant Professor in Immunology Department at MD Anderson Cancer Center. She has published more than 50 papers in reputed journals and has been serving as an Editorial Board Member of repute.

rnurieva@mdanderson.org

Notes: