

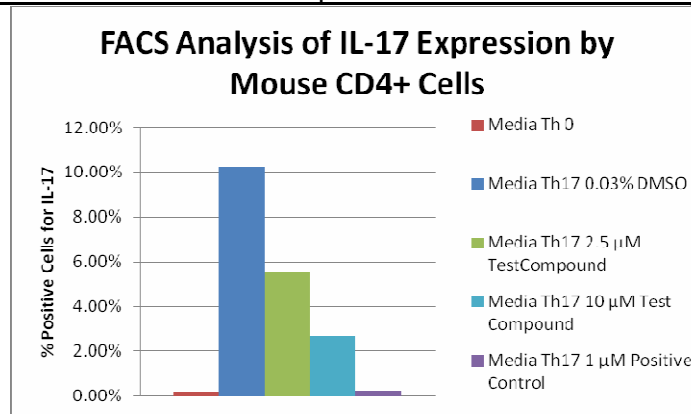
## Th17 Differentiation Study

Th17 lymphocytes protect against microbial infections but participate in autoimmune diseases including inflammatory bowel disease. Inhibitors of IL-17 cytokine or its receptor are being considered for psoriasis and arthritis indications. We developed the method of differentiation of CD4<sup>+</sup> T cells to Th17 subsets in order to assess the effects of compounds on these cells.

Flow cytometric analysis is performed to measure the changes in expression of IL-17 and Foxp3, markers of Th17 and Treg cells, respectively.

CD4<sup>+</sup> cells are isolated from mouse spleens by positive selection, seeded on anti-CD3 coated plates in Th17 polarizing media. The cells are then stimulated for cytokine production and analyzed by flow cytometry for the expression of IL-17 and FoxP3, regulatory transcription factor, markers of Th17 and Treg cells, respectively.

Graph 1: Th17 polarization induced IL-17 expression that was inhibited by a test compound.



Graph 2: FoxP3 was decreased during Th17 induction but was greatly increased in the presence all-trans retinoic acid (ATRA)

