

## **Peanut-Specific Immune Response in Bcl6 Heterozygote Knockout Mice**

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Food allergies are common in the United States, yet the mechanisms for the development and regulation of IgE, one of the most important antibodies for these allergic responses, are not fully understood. Two cells, T follicular helper (TFH) and T follicular regulatory cells (TFR) have been shown to be critical in the production of IgE in particular, as when these cells are absent, IgE production is significantly decreased while IgG1 production remains around normal levels. However, it has not been determined whether haploinsufficiency for Bcl6 or the number of TFH and TFR cells that develop in our mouse food allergy model affect allergic IgE responses. In this project, we show that haploinsufficiency of Bcl6 unexpectedly leads to a trend toward an increase in the number of TFH and TFR cells within mesenteric lymph nodes with a trend toward an increase in IgE and IgG1 in CD4-Cre-Bcl6-fl/+ mice compared to wildtype mice. However, haploinsufficiency for Bcl6 led to a loss of TFH and TFR cells in the spleen. This points to the possibility that TFH and TFR production, along with antibody production, is regulated differently in the gut compared to the rest of the body. Much remains to be understood about how TFH and TFR cells regulate allergic IgE responses.