

Full Title: **TSLP-mediated epicutaneous inflammation promotes acute diarrhea and anaphylaxis**

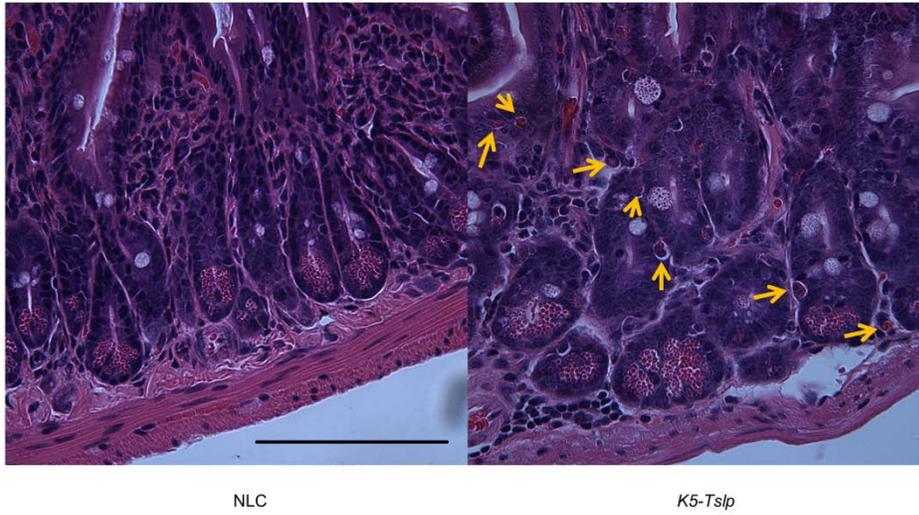
Condensed Title: **TSLP Links Atopic Dermatitis to Gastrointestinal Allergy**

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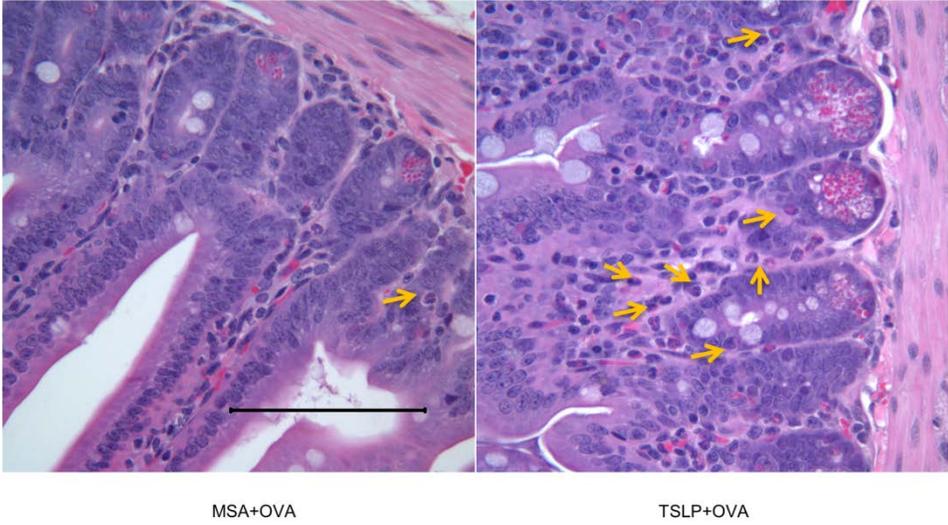
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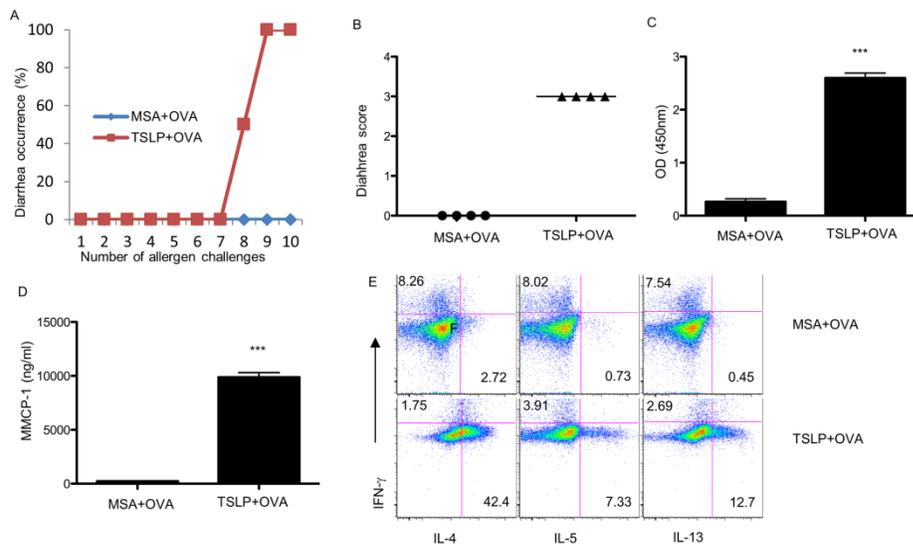
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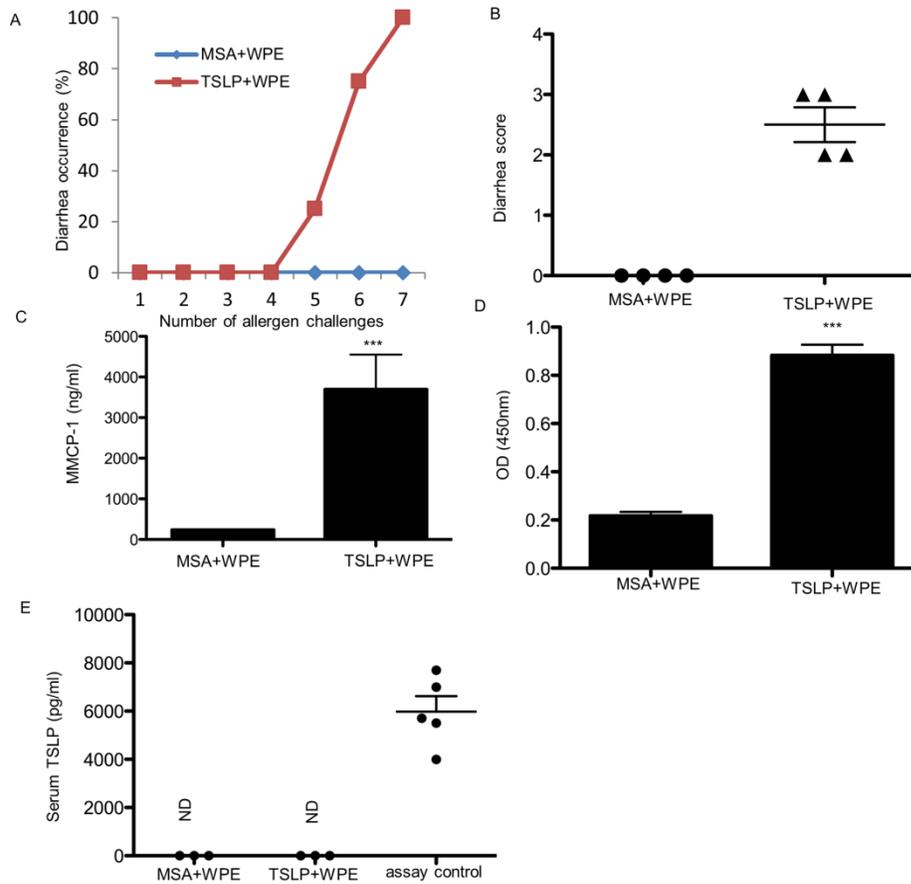
Supplemental Figure 1. Representative jejunum tissue cross sections stained with hematoxylin and eosin (H&E) to visualize eosinophils (arrow). Bar: 100 μ m.



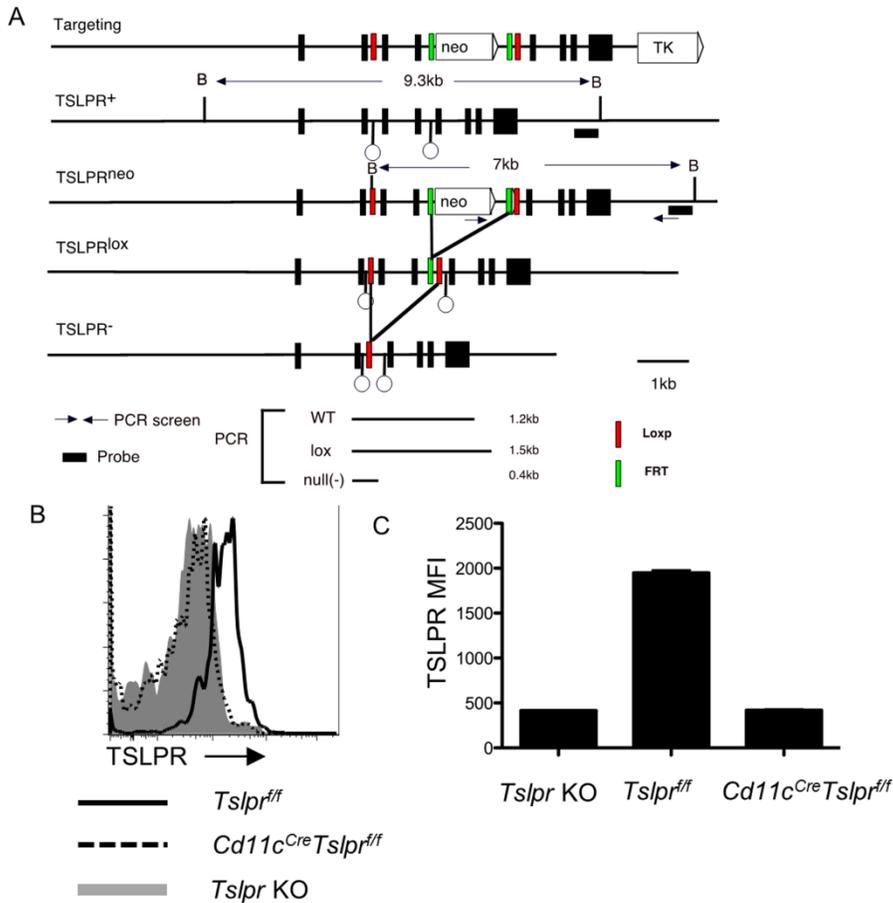
Supplemental Figure 2. Representative histology of tissue stained with H&E demonstrating a robust eosinophilic infiltration into the jejunum tissues. Yellow arrows indicate eosinophils. Bar: 100 μ m.



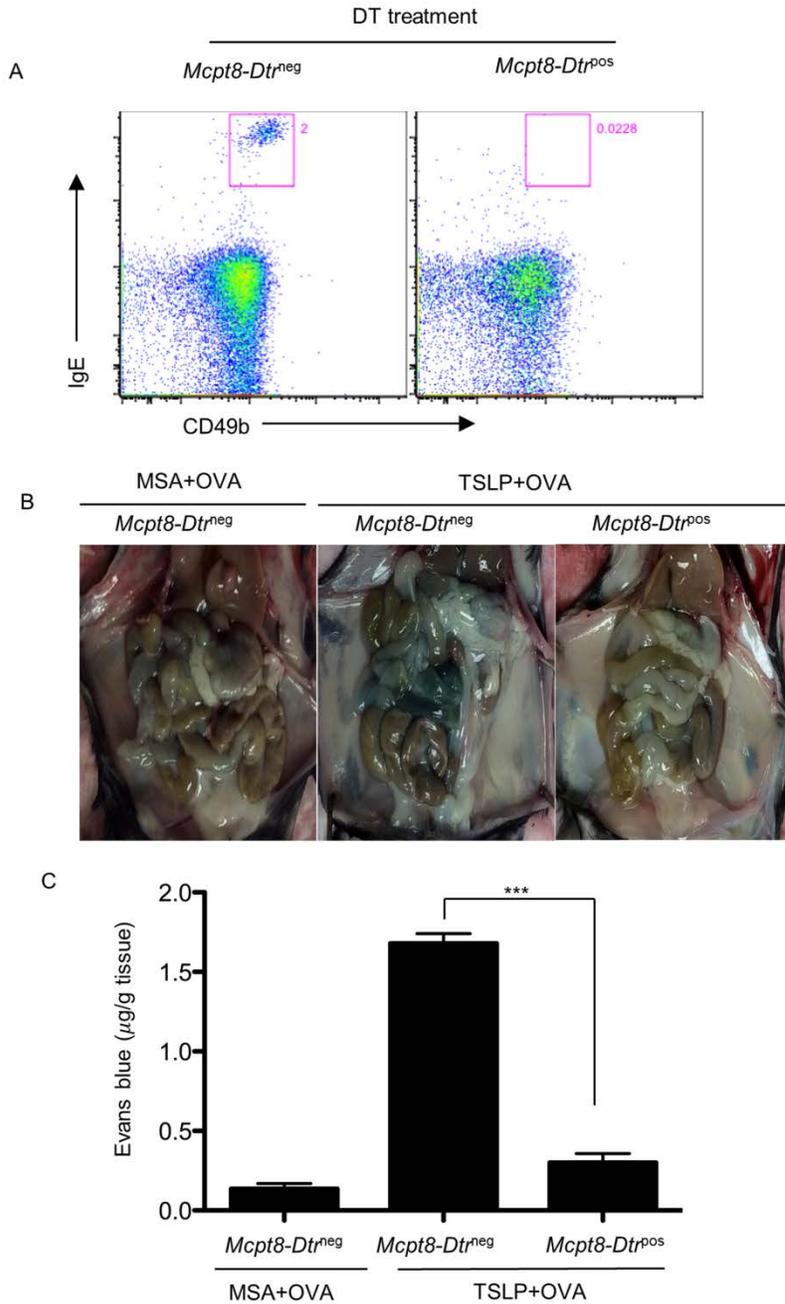
Supplemental Figure 3. Gastrointestinal allergy develops from mice rested 21 days. (A) Diarrhea occurrence. (B) Diarrhea score. (C) OVA-specific serum IgE levels. (D) MMCP-1 serum levels. The significance between two groups was determined by two-tailed Student's t test. (E) Intracellular cytokine staining of MLN cells. Plots are gated on CD4⁺CD44^{hi} cells and representative of four mice analyzed. For A, C and D, data are representative of two independent experiments with four mice per group. Error bars indicate the mean \pm SD.



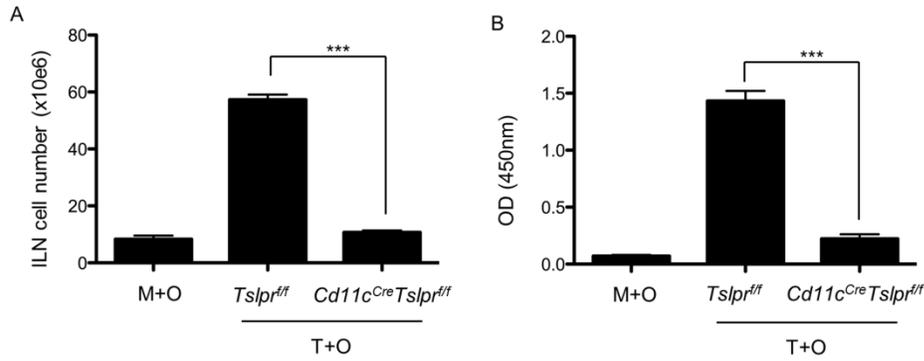
Supplemental Figure 4. Intradermal administration of TSLP and whole peanut extract (WPE) promotes gastrointestinal allergy. (A) Diarrhea occurrence. (B) Diarrhea score. (C) MMCP-1 serum levels. (D) WPE-specific serum IgE levels. (E) TSLP serum levels. N.D., <7.8 pg/ml. Data are representative of two independent experiments with four mice per group. Error bars indicate the mean \pm SD.



Supplemental Figure 5. Generation and analysis of TSLPR conditional mutant mice. (A) Diagrams of the TSLPR targeting construct, the genomic locus (TSLPR⁺) and the neomycin-containing (TSLPR^{neo}), the *loxP*-flanked (TSLPR^{lox}) and the null (TSLPR⁻) TSLPR alleles. Filled black boxes, exons; red boxes, *loxP* (L) sites; green boxes, FRT (F) sites. (B) Flow cytometry analysis of TSLPR in splenic dendritic cells. Plots are gated on CD11c⁺MHCII^{hi} cells and representative of 3 mice analyzed. (C) MFI of TSLPR on the CD11c⁺MHCII^{hi} DCs. Data are representative of four independent experiments with three mice per group. Error bars indicate the mean ± SD.



Supplemental Figure 6. Basophil responses are required in gastrointestinal allergy. (A) Frequencies of basophils in the spleen. Plots are gated on CD3⁺CD19⁻Siglec-F⁻CD49b⁺IgE⁺ cells and representative of 4 mice analyzed. (B and C) Serum leakage in the intestine. The representative images (B) and quantified graph of leaked dye (C) are indicated. Error bars indicate the mean \pm SD.



Supplemental Figure 7. TSLPR on DCs is required for epicutaneous priming. (A) Cell number in inguinal lymph nodes (ILN) at D15. (B) OVA-specific serum IgE levels at D15. Data are representative of two independent experiments with four mice per group. Error bars indicate the mean \pm SD.