

Supplemental Table 1: Changes in Eubacteria and Segmented Filamentous Bacteria with antibiotic treatments

Treatment	Fold change in eubacteria	Fold change in segmented filamentous bacteria
All antibiotics	-24.4±4.32*	-34.7±1.86*
Vancomycin	-1.92±1.60	-28.3±3.92*
Metronidazole	-10.7±7.72	-1.73±0.99
Neomycin	-19.4±9.31	0.947±.784
Ampicillin	-33.4±16.3*	-39.9±8.59*

* p<0.05: Refers to a one sample t-test where values were compared to 1.

Supplemental Table 2: Clinical characteristics of sample donors

Group	n	M/F	Median age (range)	Antibiotic use
Non-antibiotic treated	19	10M/9F	7 (0.8-19)	None
Antibiotic treated	18	10M/8F	4.9 (1.1-20)	Combinations: 12 (beta lactams, vancomycin, fluoroquinolones, carbopenamases, trimethoprim-sulfa and metronidazole) Cephalosporin alone: 4 (2 cefepime, 1 ceftriaxone, 1 cephalexin) Penicillin/semi-synthetic penicilins alone: 3 (2 oxacillin; 1 amoxicillin)

A.

Untreated mouse

Antibiotics treated mouse

Spleen



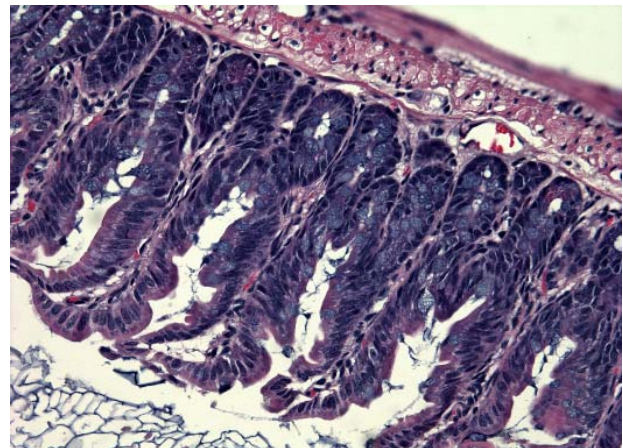
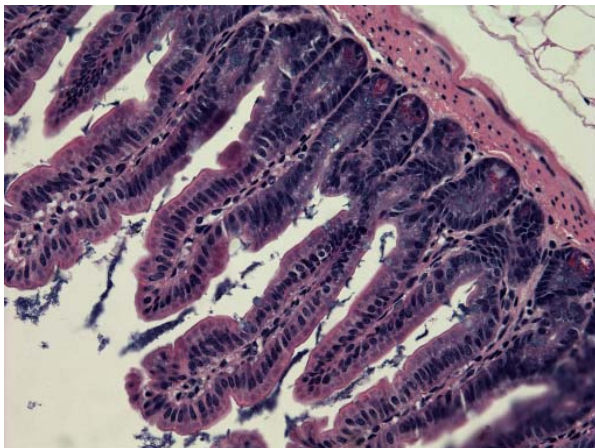
Cecum



B.

Untreated mouse

Antibiotics treated mouse



Supplemental Figure 1: Enlarged cecum and small bowel histology in mice treated with antibiotics. A: The cecum and spleen are shown in representative humanized mice without (L) and 2 weeks following treatment with antibiotics (right). B: Small bowel histology is shown.

Weeks after transplant: Wk 1.5 Wk 4

Treatment

hlg, no Abx



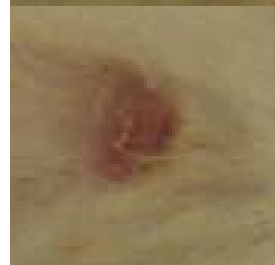
hlg, Abx



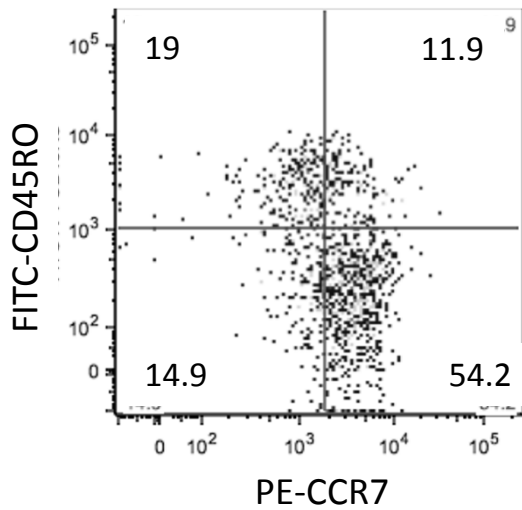
Tep, no Abx



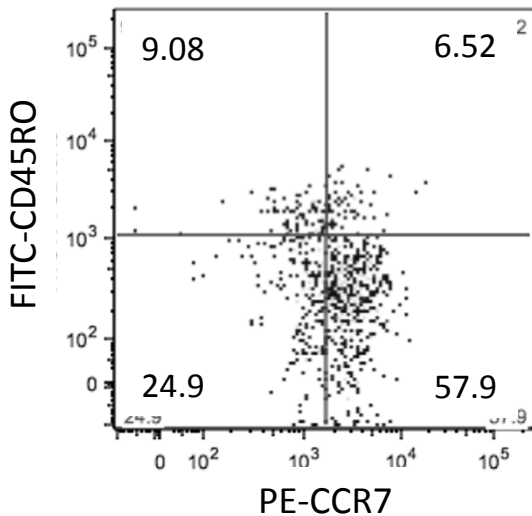
Tep, Abx



Supplemental Figure 2: Representative skin grafts on humanized mice. (Tep=teplizumab, Abx=antibiotics)



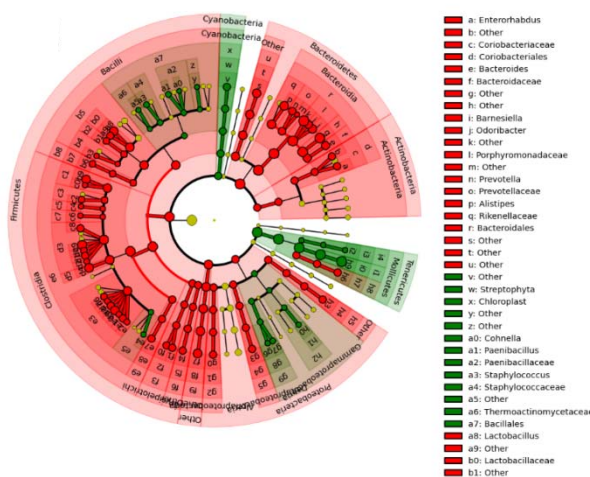
Teplizumab, no antibiotics



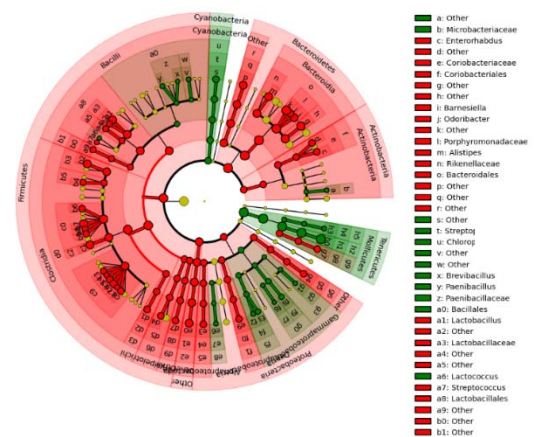
Teplizumab, antibiotics

Supplemental Figure 3: Representative FACS dot-plots of CCR7 vs CD45RO staining of CD8⁺ T cells in MLN 18 hrs after treatment with teplizumab with or without antibiotics. There was a significantly higher proportion of CD8CM T cells (CD45RO⁺CCR7⁺) in mice treated with teplizumab without antibiotics. The plots shown are representative of the 9 and 8 mice in Figure 4c.

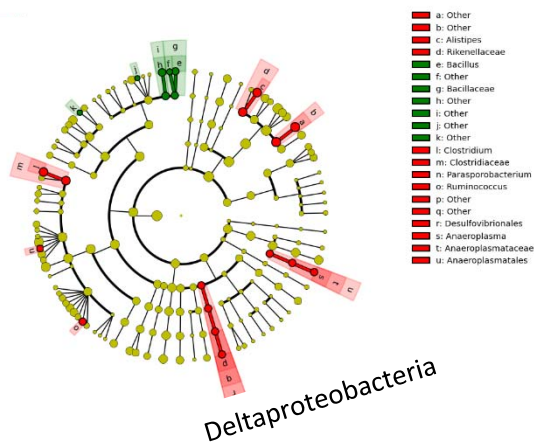
No Abx (Red) vs. All Abx (Green)



No Abx (Red) vs. Ampicillin (Green)

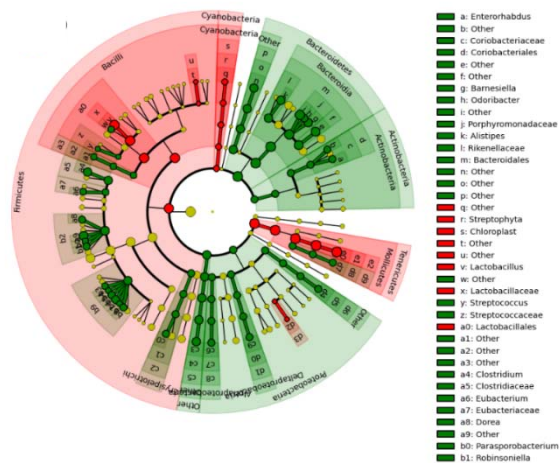


No Abx (Red) vs. Metronidazole (Green)



Supplemental Figure 4:
Claudograms of the microbiota following treatment with all and individual antibiotics compared to no antibiotics

No Abx (Red) vs. Vancomycin (Green)



No Abx (Red) vs. Neomycin (Green)

