Cecum Bile Acid Comparisons C. difficile Toxin Histopathology TcdA TcdB Cecum p-value: 1.53e-12 6 1000 r2: 0.345 100 C. difficile Inhibitor C. difficile Inhibitor (pmol/mg) (pmol/mg) p-value: 9.73e-09 Toxin Concentration (ng/uL) (log10) 10 r2: 0.234 r2: 0.269 6 r2: 0.304 **Mouse Diet** Score Chow C. difficile Promoter C. difficile Promoter HFt / HFb (pmol/mg) (pmol/mg) HFt / LFb LFt / HFb 10 LFt / LFb p-value: 0.00126 r2: 0.501 C. difficile C. difficile 100 Promoter:Inhibitor Promoter:Inhibitor (ratio) (ratio) 10 1000 10000 100 1000 10000 100 1000 10000 100 10 Bile Acid Concentration (log10) b) **Cecum SCFA Concentration** Propionate Acetate 4000 750 -(b/bn) 3000 Concentration 500 2000 250 HFt/ HFt/ LFt/ LFt/ Chow HFt/ LFt/ LFt/ HFt/ Chow HFb HFb LFb LFb LFb HFb LFb HFb Diet c) Cecum Acetate and Propionate Comparisons C. difficile Toxin Histopathology TcdA TcdB Cecum p-value: 7.86e-07 p-value: 8.25e-06 p-value: 6.47e-07 Toxin Concentration (ng/uL) (log10) r2: 0.413 r2: 0.373 r2: 0.416 Acetate Acetate **Mouse Diet** Score Chow • p-value: 1.95e-06 p-value: 7.21e-06 p-value: 1.67e-05 LFt / HFb r2: 0.36 LFt / LFb Propionate Propionate 0 1000 1000 10 100 1000 10 100 10 100 SCFA Concentration (ug/g) (log10)

a)