## a) Cecum Tissue Damage Scores **Epithelial Integrity** Number of Goblet Cells Neutrophil Infiltration Submucosal Edema Total 7.5 -Score 2.0-2.5 LFt/ LFb LFt/ LFb LFt/ LFb LFt/ LFb Chow HFt/ HFt/ LFt/ LFb Chow HFt/ HFt/ LFt/ Chow HFt/ HFt/ LFt/ Chow HFt/ HFt/ Chow HFt/ HFt/ LFt/ HFb LFt/ LFt/ HFb HFb HFb LFb HFb LFb HFb HFb LFb HFb LFb LFb HFb HFb Diet b) Cecum Hypoxia c) Cecum Tissue Damage by Hypoxia High Fat / High Fiber Chow High Fat / Low Fiber Low Fat / High Fiber Low Fat / Low Fiber Cecum 30000 20000 60000 **Epithelial Integrity** 10000 30000 20000 Number of Goblet Cells Horescence 20000 20000 0 20000 20000 10000 10000 Eluorescence 50000 - 2 10000 Neutrophil Infiltration Submucosal Edema 10000 30000 -Total 10000 Chow HFt/ HFt/ LFt/ LFt/ HFb HFb LFb LFb Score Diet d) e) Toxin Concentration and Cecum C. difficile Toxin by Total Tissue Damage Score Tissue Damage Comparisons High Fat / High Fiber High Fat / Low Fiber Low Fat / High Fiber Low Fat / Low Fiber Chow Cecum Colon LFt/LFb -TcdA Correlation LFt/HFb ns Coefficient Score HFt/LFb -0.5 ns 0.0 HFt/HFb --0.5ns TcdB Chow ns ns ns 1000 TcdB TcdA 1000 100 100 1000 100 1000 TcdA TcdB 100 1000 100 10 10 Concentration (log10) Toxin