Cecum Tissue Damage by Hypoxia a) High Fat / High Fiber High Fat / Low Fiber Low Fat / High Fiber Low Fat / Low Fiber 30000 20000 **Epithelial Integrity** 10000 30000 20000 Number of Goblet Cells 10000 Fluorescence 30000 20000 Neutrophil Infiltration 10000 30000 20000 Submucosal Edema 10000 30000 20000 Total 10000 Score Colon Tissue Damage by Hypoxia b) Chow High Fat / High Fiber High Fat / Low Fiber Low Fat / High Fiber Low Fat / Low Fiber 30000 20000 Crypt Damage 10000 30000 20000 **Epithelial Regeneration** 10000 Fluorescence 30000 20000 Severity of Inflammation 10000 30000 20000 Extent of Injury 10000 30000 20000 Total 10000 Score Histopathology and Hypoxia Concentration Comparisons c) Cecum Colon LFt/LFb Correlation ns Coefficient LFt/HFb ns 0.4 HFt/LFb ns 0.0 HFt/HFb ns -0.4 Chowns ns ns ns ns ns ns **Epithelial** Number of Neutrophil Submucosal Total Crypt Epithelial Severity of Extent of Total Integrity Goblet Cells Regeneration Inflammation Infiltration Damage Edema Injury