**SUPPLEMENTAL FIGURE LEGENDS:**

**Supplemental figure 1: Expression of TNFα, IL-6 and IL-8 mRNA in different cells types in the respiratory tract of highly pathogenic H5N1 virus inoculated ferrets detected by in situ hybridization.** TNFα mRNA (A-F) was expressed in macrophage like cells in the interstitium (arrowhead; A and D) or within the alveolar lumina (arrowhead; B and E) and alveolar epithelial cells (arrowhead; C and F). IL-6 (G-L) was expressed in bronchial epithelial cells (arrowhead; G and J), bronchiolar epithelial cells (arrowhead; H and K) and alveolar epithelial cells (arrowhead; I and L). IL-8 mRNA was expressed in infiltrating neutrophils in the bronchiole (arrowhead; M and O) and the alveoli (arrowhead; N and P). Original magnification 400x (A-C, G-I and M-N) or 1000x (D-F, J-L and O-P)

**Supplemental figure 2: Expression of TNFα, IL-6 and IL-8 mRNA in different cells types in the central nervous system of highly pathogenic H5N1 virus inoculated ferrets detected by in situ hybridization.** TNFα mRNA was expressed in small neurons or microglia (arrowhead; A and B). IL-6 mRNA (C-E) was expressed in small neurons or microglia cells (arrowhead; A and D) and endothelial cells (open arrowhead C and E). IL-8 mRNA (F-H) was expressed in small neurons or microglial cells (arrowhead; F and G) and endothelial cells (H). Original magnification 200x (A, C and F) or 1000x (B, D, E, G and H)

**Supplemental figure 3: Expression of IL-8 mRNA in different cells types in the spleen and liver of highly pathogenic H5N1 virus inoculated ferrets detected by in situ hybridization.** In the spleen (A-C) IL-8 mRNA was expressed in macrophage like cells (arrowhead; A and B) and megakaryocytes (C). In the liver (D-E) IL-8 was expressed in fibroblasts or Kupffercells (arrowhead; D and E) and endothelial cells (E).

**Supplemental figure 4: Expression of TNFα, IL-6 and IL-8 mRNA in different cells types in the heart of highly pathogenic H5N1 virus inoculated ferrets detected by in situ hybridization.** TNFα mRNA (A-C) was expressed in cardiomyocytes (arrowhead: A, B and C). IL-6 mRNA (D-F) was expressed in endothelial cells and fibroblasts (arrowhead; D), cardiomyocytes (open arrowhead; D and E) and endocardial cells (F). IL-8 mRNA (G-I) was expressed in myocardial cells (arrowhead ; G and H) and intravascular neutrophils (open arrowhead; G and H).

**Supplemental figure 5: Expression of TNFα, IL-6 and IL-8 mRNA in different cells types in the pancreas of highly pathogenic H5N1 virus inoculated ferrets detected by in situ hybridization.** TNFα mRNA (A-C) was expressed in few bile duct cells (arrowhead; A and B). IL-6 mRNA (C-E) was expressed in acinar cells (arrowhead; C and D) and bile duct cells (E). IL-8 mRNA (F-H) was expressed in fibroblasts (open arrowheads; F). endothelial cells (arrowheads; F and H) and acinar cells (G).