Supplemental Information— Avian Influenza Virus Titers in Mouse and Ferret Models

Below are results from avian influenza infection studies in mouse and ferret models from Kim et al., Gillim-Ross et al., and Xu et al. Each presents titration levels of different avian influenza subtypes— H5N8, H7N9, and several H6 types— after viral dissemination to various organs. The viral titers are reported per gram of tissue on days past infection when the animals were sacrificed. No information was available on the viral load per whole organ or animal; however, the average lung weight is from 110-150 milligrams for mice[1] and 15 grams for ferrets[2] and therefore, it may be roughly calculated.

[1] GmbH MB. Lung Dissociation Kit: Mouse. https://www.miltenyibiotec.com/~/media/Files/Navigation/Sample%20preparation/Customer%20protocols/DS130-095-927.ashx. Last Update 2012. Accessed October 2015.

[2] Friesen RH *et al* (2010) New class of monoclonal antibodies against severe influenza: prophylactic and therapeutic efficacy in ferrets. *PLoS One* 5**:** e9106

Table S1. Influenza Viral Titers in Mice			
Lung			
Days Past Infection	**H7N9 (Xu et al.[3])**	**H6N? (Gillim-Ross et al.[4])**	**H5N8 (Kim et al.[5])**
	Mean Log10 TCID50/g tissue	**Log10 EID50/g tissue**	**Log10 EID50/g tissue**
1	4.15	1.5-5.9	-
2	5.69	1.5-7.1	-
3	4.38	1.6-7.3	2.6-6.0
4	-	1.6-6.2	-
5	5.38	-	3.0-6.25
7	3.69	1.5-5.9	-
Max	5.69	7.3*	6.25
Min	3.69	1.5*	2.6
Bronchoalveolar lavage fluid (BALF)			
Days Past Infection	**H7N9 (Xu et al.[6])**		
	Mean Log10 TCID50/g tissue		
1	3.75		
2	2.31		
3	2.75		
5	3.58		
7	2.31		
Max	3.75		
Min	2.31		
Nasal			
Days Past Infection	**H6N? (Gillim-Ross et al.[7])**		
	Mean Log10 TCID50/g tissue		
1	1.8-2.3		
2	1.8-3.7		
3	1.8-2.8		
4	1.8-4.0		
7	1.8-3.8		
Max	4.0*		
Min	1.8*		
See Figure 1.			

[3] Xu L *et al* (2013) The mouse and ferret models for studying the novel avian-origin human influenza A (H7N9) virus. *Virol J* 10**:** 253

[4] Gillim-Ross L *et al* (2008) Avian influenza h6 viruses productively infect and cause illness in mice and ferrets. *J Virol* 82**:** 10854-10863

[5] Kim YI *et al* (2014) Pathobiological features of a novel, highly pathogenic avian influenza A(H5N8) virus. *Emerg Microbes Infect* 3**:** e75

[6] Xu L *et al* (2013) The mouse and ferret models for studying the novel avian-origin human influenza A (H7N9) virus. *Virol J* 10**:** 253

[7] Gillim-Ross L *et al* (2008) Avian influenza h6 viruses productively infect and cause illness in mice and ferrets. *J Virol* 82**:** 10854-10863

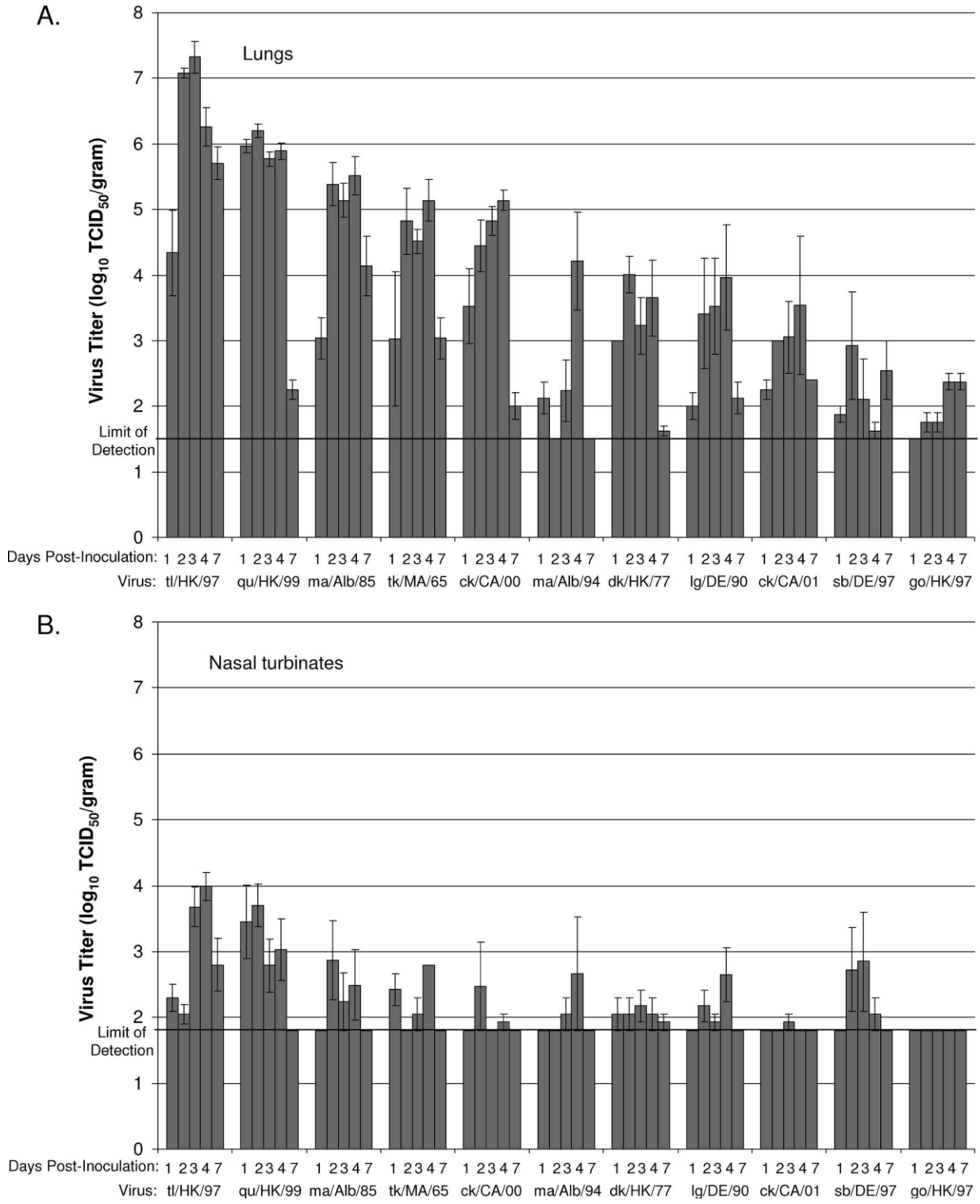

Figure S1. Reproduced from Gillim-Ross et al.[8], Replication and pathogenicity of selected avian influenza H6 subtype viruses in mice. (A and B) Groups of mice were inoculated i.n. with 14 different H6 viruses. Lungs and NT were harvested on the indicated days postinoculation. Virus titers in the lungs (A) and NT (B) were

[8] Ibid.

determined in MDCK cells. The lower limits of detection were 101.8 and 101.5 TCID50 per gram for the NT and lungs, respectively.

Table S2. Influenza Viral Titers in Mice			
Lung			
Days Past Infection	**H7N9 (Xu et al.[9])**	**H6N? (Gillim-Ross et al.[10])**	**H5N8 (Kim et al.[11])**
	Mean Log10 TCID50/g tissue	**Log10 EID50/g tissue**	**Log10 EID50/g tissue**
1	-	5.7-7.0	-
3	2.59	3.0-7.0	2.0-5.0
5	-	3.2-7.2	2.5-4.0
7	2.87	-	-
Max	2.87	7.2	5.0
Min	2.59	3.0	2.0
Trachea			
Days Past Infection	**H7N9 (Xu et al.[12])**		
	Mean Log10 TCID50/g tissue		
3	4.92		
7	4.11		
Nasal			
Days Past Infection	**H6N? (Gillim-Ross et al.[13])**		
	Mean Log10 PFU/g tissue		
1	4.3-5.9		
3	3.9-6.2		
5	3.4-6.1		
Max	3.2		
Min	6.2		

[9] Xu L *et al* (2013) The mouse and ferret models for studying the novel avian-origin human influenza A (H7N9) virus. *Virol J* 10**:** 253

[10] Gillim-Ross L *et al* (2008) Avian influenza h6 viruses productively infect and cause illness in mice and ferrets. *J Virol* 82**:** 10854-10863

[11] Kim YI *et al* (2014) Pathobiological features of a novel, highly pathogenic avian influenza A(H5N8) virus. *Emerg Microbes Infect* 3**:** e75

[12] Xu L *et al* (2013) The mouse and ferret models for studying the novel avian-origin human influenza A (H7N9) virus. *Virol J* 10**:** 253

[13] Gillim-Ross L *et al* (2008) Avian influenza h6 viruses productively infect and cause illness in mice and ferrets. *J Virol* 82**:** 10854-10863