Protein	Model
PB2	FLU+R4
PB1	FLU+R4
PA	FLU+R5
HA	FLU+R8
NP	Q.mammal+R4
NA	FLU+R5
M1	Q.mammal+R3
NS1	HIVw+R6

Table 1: Evolutionary models attributed to each protein.

Protein	Avian	Mammal
PB2	338	561
PB1	303	255
PA	282	415
HA	1406	919
NP	215	244
NA	185	207
M1	73	149
NS1	539	606

Table 2: Protein sequences that differ more than 5% in sequence identity. These were used for both phylogenetic and ML models.

Protein	$F1_{micro}$	$F1_{macro}$	AUC
PB2	0.8431	0.5177	0.570
PB1	0.8074	0.3840	0.527
PA	0.8750	0.5749	0.575
HA	0.7699	0.2947	0.558
NP	0.8840	0.4957	0.556
NA	0.7349	0.3321	0.527
M1	0.8632	0.5168	0.559
NS1	0.9098	0.5188	0.565

Table 3: Machine Learning accuracy statistics, calculated from confusion matrices where the predicted origin host was compared against the known host of origin.