

Table S2. Model selection to assess the better models to test the relationship between maternal avian influenza virus (AIV) antibody concentration in egg yolk and the covariates of interest for the field and captive study. The better models are shown in bold.

Study	Model	Covariate	df	logLik	AIC _c	ΔAIC _c
Field study ¹	6	$m^3 + s^4 + a^5 + v^6 + es^7 + esi^8 + m^*a$	10	106.649	-193.3	0.00
	5	$m + s + a + v + es + esi + m^*a + m^*v$	11	107.516	-193.0	0.27
	4	$m + s + a + v + es + esi + m^*a + m^*v + m^*es$	12	107.998	-192.0	1.30
	7	$m + s + a + v + es + esi$	9	104.906	-191.8	1.49
	3	$m + s + a + v + es + esi + m^*a + m^*v + m^*es + a^*v$	13	108.187	-190.4	2.92
	1	$m + s + a + v + es + esi + m^*a + m^*v + m^*es + a^*v + a^*es + v^*es$	15	109.483	-189.0	4.33
	2	$m + s + a + v + es + esi + m^*a + m^*v + m^*es + a^*v + a^*es$	14	108.390	-188.8	4.52
Captive study ²	7	$m + s + a + v + l^9 + esi$	9	39.438	-60.9	0.00
	6	$m + s + a + v + l + esi + m^*a$	10	39.438	-58.9	2.00
	5	$m + s + a + v + l + esi + m^*a + m^*v$	11	40.067	-58.1	2.74
	4	$m + s + a + v + l + esi + m^*a + m^*v + m^*l$	12	40.101	-56.2	4.67
	3	$m + s + a + v + l + esi + m^*a + m^*v + m^*l + a^*v$	13	40.122	-54.2	6.63
	2	$m + s + a + v + l + esi + m^*a + m^*v + m^*l + a^*v + a^*l$	14	40.927	-53.9	7.02
	1	$m + s + a + v + l + esi + m^*a + m^*v + m^*l + a^*v + a^*l + v^*l$	15	40.933	-51.9	9.01

¹Free-living mallards and eggs

²Captive mallards and eggs

³m: body mass

⁴s: female size (first principal component [PC1] of tarsus, head+bill and wing lengths [no wing in captive study])

⁵a: relative concentration of antibodies against avian influenza virus in female sera

⁶v: egg volume ($0.000515 \times L \times B_1 \times B_2$ [L: length, B_1 , B_2 : breadth])

⁷es: embryo sex

⁸esi: embryo size

⁹l: laying order