Blue-winged Teal - Cloaca Swab Virus Titer MLR model supporting material

Global Model: $Swab\ Titer = 1 + factor(Sex) + mass + age + BCS + factor(group) + Proximal\ Villi + Proximal\ Brush\ Border + Proximal\ Crypts + Ileum\ Villi + Cecum\ Villi + Cecum\ Brush\ Border + Cecum\ Crypts + Colon\ Villi + Colon\ Brush\ Border + Colon\ Crypts + Bursa$

Final Model: $Swab\ Titer = 1 + factor(Sex) + mass + BCS + factor(group) + Proximal\ Crypts + Bursa$

Y	N	R^2	X	EST. (95% CI) LOG10(EID50/ML)	P
TEAL CLOACA SWAB VIRUS TITER	32	0.61	Intercept	8.35 (-7.50 to 24.20)	0.288
			Sex (Male)	-0.60 (--1.30 to 0.09)	0.086
			mass	0.01 (0.01 to 0.02)	0.001
			BCS	-0.81 (-1.50 to -0.12)	0.023
			group (T3)	-0.12 (-0.97 to 0.73)	0.780
			group (T5)	-1.92 (-2.67 to -1.17)	<0.001
			Proximal Crypts	-4.88 (-12.23 to 2.54)	0.189
			Bursa	1.66 (-0.11 to 3.42)	0.064

Y = dependent variable, N = number of individual birds in model, X = independent variables in final model, CI = 95% confidence interval, p = p-value. Proximal includes the duodenum and jejunum. BCS = Body Condition Score. Group and Sex were treated as factors in each model, and if present in final model, group T1 and females are represented in the intercept.

Step	Model	AIC	ΔAIC
NA	Global	-0.09	NA
1	Global – Colon Crypts	-0.09	0.00
2	Step 1 – Colon Villi	-0.09	0.00
3	Step 2 – Colon BB	-0.09	0.00
4	Step 3 – Ileum Villi	-0.09	0.00
5	Step 4 – Proximal BB	-2.09	2.00
6	Step 5 – Cecum Villi	-4.04	1.95
7	Step 6 – Cecum Crypts	-5.73	1.69
8	Step 7 - age	-7.46	1.73
9	Step 8 – Cecum BB	-8.21	0.75
10	Step 9 – Proximal Villi	-8.31	0.10

Residual Plots