

**Supplemental Table 1. Pairwise association between virus prevalence and site**

Virus	Site pairwise comparison	OR	95% confidence interval		p-value*
			Lower limit	Upper limit	
MuAPBV	M3 vs M2	54.4	7.1	7.0x10 <sup>3</sup>	2.1x10 <sup>-7</sup>
	M3 vs Q1	60.0	19.3	300.1	<1.0x10 <sup>-11</sup>
	M3 vs X1	57.0	7.5	7.3x10 <sup>3</sup>	9.3x10 <sup>-8</sup>
MuBV	Q1 vs M3	28.6	3.7	3.7x10 <sup>3</sup>	8.5x10 <sup>-5</sup>
MuCPV	Q1 vs X1	5.9	2.4	17.4	5.5x10 <sup>-5</sup>
LaDV	M3 vs M2	9.6	2.7	51.1	1.5x10 <sup>-4</sup>
	M3 vs Q1	240.2	33.4	3.1x10 <sup>4</sup>	<1.0x10 <sup>-11</sup>
	M3 vs X1	41.3	5.3	5.3x10 <sup>3</sup>	6.5x10 <sup>-5</sup>
MHV	M3 vs M2	47.3	5.8	6.2x10 <sup>3</sup>	6.5x10 <sup>-5</sup>
	M3 vs Q1	8.7	3.8	21.4	6.8x10 <sup>-8</sup>
	M3 vs X1	31.9	4.0	4.1x10 <sup>3</sup>	7.0x10 <sup>-5</sup>
MuAst-1	M3 vs Q1	2.6	1.6	4.4	2.7x10 <sup>-4</sup>
MuAst-2	M2 vs X1	69.2	8.3	9.1x10 <sup>3</sup>	5.5x10 <sup>-7</sup>
	M3 vs X1	103.4	13.6	1.3x10 <sup>4</sup>	5.0x10 <sup>-11</sup>
	Q1 vs X1	47.3	6.4	6.0x10 <sup>3</sup>	2.4x10 <sup>-7</sup>
MNV	M2 vs M3	141.0	16.6	1.9x10 <sup>4</sup>	4.4x10 <sup>-9</sup>
	M2 vs X1	37.7	4.4	5.0x10 <sup>3</sup>	9.4x10 <sup>-5</sup>
	Q1 vs M3	74.1	10.0	9.5x10 <sup>3</sup>	8.2x10 <sup>-10</sup>
MuSaV	M3 vs Q1	4.4	2.2	9.2	2.7x10 <sup>-5</sup>
	M3 vs X1	26.8	3.5	3.5x10 <sup>3</sup>	1.6x10 <sup>-4</sup>
MuPiV	Q1 vs M3	38.2	5.1	4.9x10 <sup>3</sup>	3.1x10 <sup>-5</sup>
MuKoV	Q1 vs X1	25.6	3.5	3.3x10 <sup>3</sup>	7.2x10 <sup>-5</sup>
MuRotaV	M3 vs Q1	42.7	5.2	5.5x10 <sup>3</sup>	2.4x10 <sup>-5</sup>

Odds ratios (OR) were calculated using Firth logistic regression analysis. Only statistically significant associations shown (family-wise error rate controlled at 0.05 level)