

IL-6 production following vaccination in pigs – an additional immune response parameter for assessing FMD vaccine efficacy?

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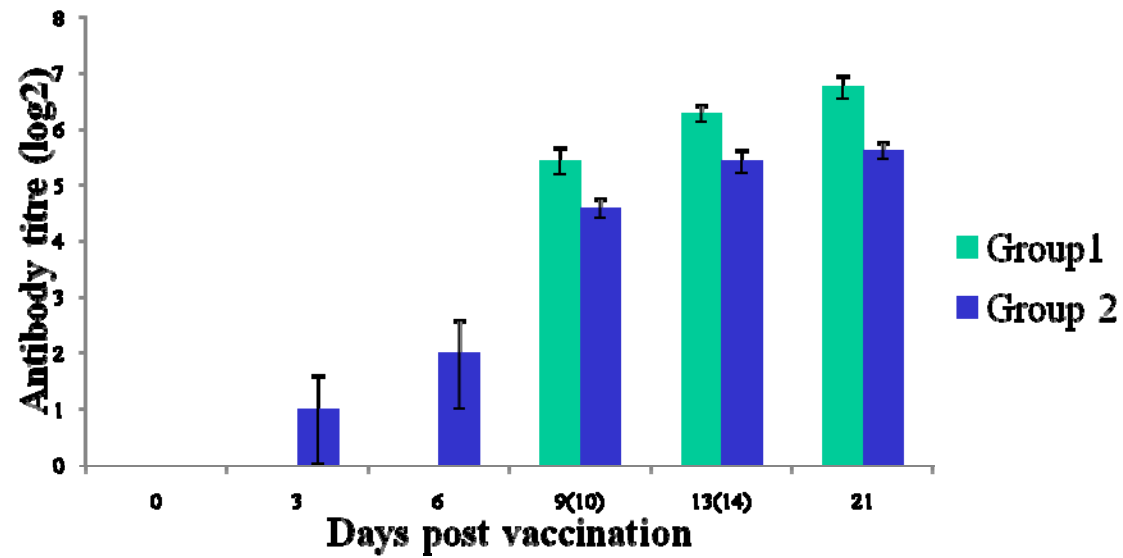


Fig1: Virus neutralisation antibody data for pigs vaccinated with O Manisa 1/78



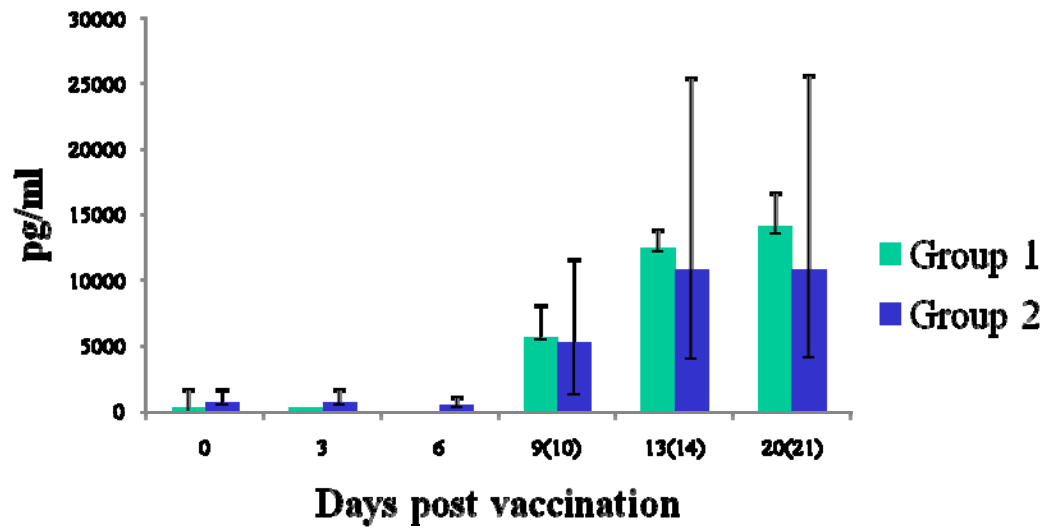


Fig 2: Mean systemic IL-6 levels in pigs vaccinated with O Manisa 1/78



	Trial				
Dose	1	2	3	5	6
0.000	1.780	1.780	1.780	-	1.780
0.125	3.062	2.554	3.932	2.850	-
0.500	3.234	4.054	1.064	3.722	4.024
2.000	4.940	5.394	5.318	5.322	4.714
Sig Prob	0.018	0.002	<0.001	0.024	0.017
Sample size	16	17	16	15	12

Table 1: Means of logged IL6 values at each dose level (28dpv)



	Trial			
Log IL-6	1	2	3	6
2	0.559	0.571	0.000	0.001
3	0.876	0.882	0.000	0.004
5	0.996	0.996	0.000	0.115
7	0.999	0.999	0.001	0.802

Table 2: Probability of protection at selected levels of log IL6 (28dpv)



Table 2	Trial			
Log IL-6	1	2	3	6
2	2.42	2.84	1.73	1.68
3	2.79	3.21	2.10	2.05
5	3.51	3.94	2.82	2.77
7	4.24	4.67	3.55	3.50

Table 3: Model predictions of the mean values of log VNT at selected levels of IL6 (28dpv)



Conclusion

Preliminary investigation suggests that detection of IL-6 in serum following FMD vaccination may provide an additional parameter for assessing whether a vaccine will afford clinical protection or not in pigs

This area of research thus provides the possibility of improved vaccine potency testing in pigs, both in terms of animal health and cost, as the need to challenge could become unnecessary.

Acknowledgements

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