

1 **Enhancing antibody levels and T cell activity of quadrivalent**
2 **influenza vaccine by combining it with CpG HP021**

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Supporting Information

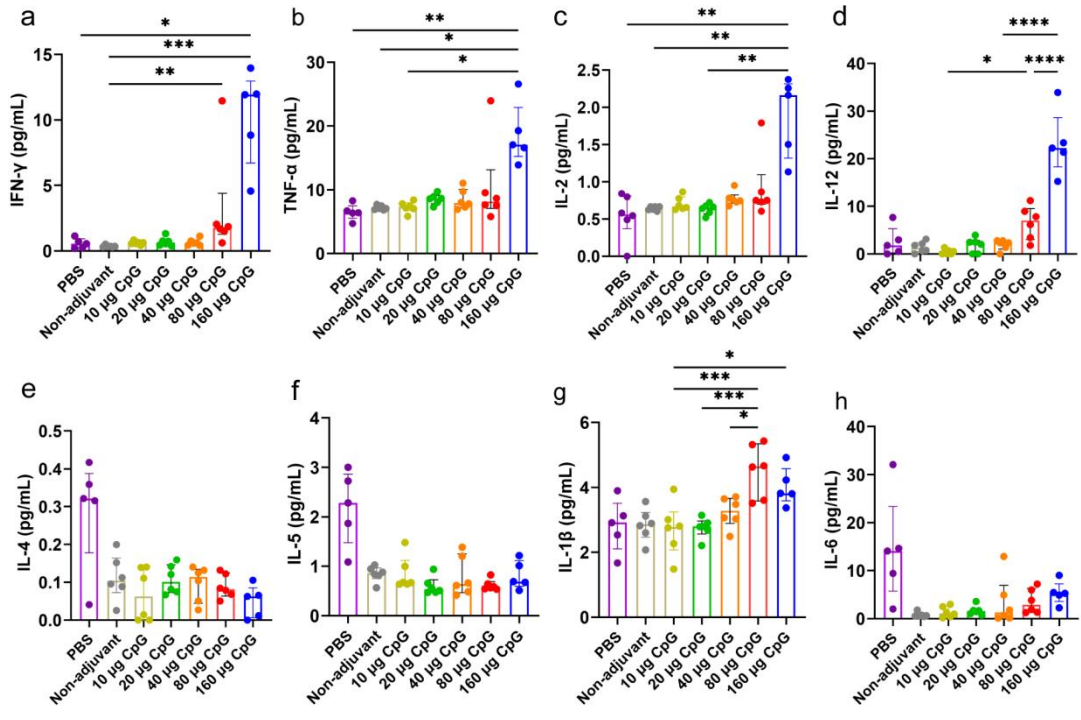
16 **Supplementary Table 1. The seroconversion rates of the antibodies after**17 **vaccination in mice.**18 **The seroconversion rates of the antibodies (%)**

Groups (No.)		Day 14	Day 21	Day 28	Day 56
IIV4 antigen (Non-adjuvant)	H1N1	0.0%	75.0%	100.0%	100.0%
	H3N2	0.0%	50.0%	58.3%	66.7%
	BV	0.0%	41.7%	91.7%	83.3%
	BY	0.0%	0.0%	8.3%	33.3%
IIV4 + 10 μ g CpG	H1N1	0.0%	100.0%	100.0%	100.0%
	H3N2	0.0%	66.7%	77.8%	100.0%
	BV	83.3%	100.0%	100.0%	100.0%
	BY	0.0%	55.6%	66.7%	33.3%
IIV4 + 20 μ g CpG	H1N1	16.7%	100.0%	100.0%	100.0%
	H3N2	0.0%	75.0%	91.7%	66.7%
	BV	83.3%	100.0%	100.0%	100.0%
	BY	0.0%	66.7%	91.7%	83.3%
IIV4 + 40 μ g CpG	H1N1	75.0%	100.0%	100.0%	100.0%
	H3N2	8.3%	91.7%	100.0%	100.0%
	BV	100.0%	100.0%	100.0%	100.0%
	BY	0.0%	100.0%	100.0%	100.0%
IIV4 + 80 μ g CpG	H1N1	41.7%	91.7%	100.0%	100.0%
	H3N2	0.0%	83.3%	91.7%	100.0%
	BV	91.7%	100.0%	100.0%	100.0%
	BY	0.0%	83.3%	91.7%	100.0%
IIV4 + 160 μ g CpG	H1N1	75.0%	100.0%	100.0%	100.0%
	H3N2	0.0%	83.3%	91.7%	100.0%
	BV	91.7%	100.0%	100.0%	100.0%
	BY	0.0%	91.7%	91.7%	100.0%

19 **Supplementary Table 2. The seroconversion rates of antibodies after the**
 20 **vaccination in SD rats.**

The seroconversion rates of antibodies (%)				
Groups (No.)		Day 14	Day 21	Day 28
IIV4 antigen (Non-adjuvant)	H1N1	100%	100%	100%
	H3N2	0%	50%	33%
	BV	100%	100%	100%
	BY	33%	83%	67%
6 µg IIV4 + 50 µg CpG	H1N1	100%	100%	100%
	H3N2	50%	100%	100%
	BV	100%	100%	100%
	BY	100%	100%	100%
6 µg IIV4 + 100 µg CpG	H1N1	100%	100%	100%
	H3N2	67%	100%	100%
	BV	100%	100%	100%
	BY	100%	100%	100%
6 µg IIV4 + 200 µg CpG	H1N1	100%	100%	100%
	H3N2	83%	100%	100%
	BV	100%	100%	100%
	BY	100%	100%	100%
6 µg IIV4 + 400 µg CpG	H1N1	100%	100%	100%
	H3N2	100%	100%	100%
	BV	100%	100%	100%
	BY	100%	100%	100%

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23 **Supplementary Fig 1. Analysis of serum cytokine levels in mice at day 28.**