

Supplemental data

Grade	Redness (mm)	Swelling (mm)	Pain	Other
0	0	0	No pain at all	None
1	< 50	< 20	Painful to touch. No restriction in movement of arms, able to work, drive, carry heavy objects as normal	Mild: Transient or mild discomfort (< 48 hours); no medical intervention/therapy required
2	50 – 100	20 – 50	Painful when limb is moved (i.e. restriction in range of movement in arm, difficulty in carrying objects)	Moderate: Mild to moderate limitation in activity - some assistance may be needed; no or minimal medical intervention/therapy required
3	> 100	> 50	Severe pain at rest (i.e. unable to use arm due to pain.)	Severe: Marked limitation in activity, some assistance usually required; medical intervention/therapy required, hospitalisation possible
4	-	-	-	Serious, life-threatening: Extreme limitation in activity, significant assistance required; significant medical intervention/therapy required, hospitalisation or hospice care probable

Online Table A: **Severity grading scales** used to assess adverse events.

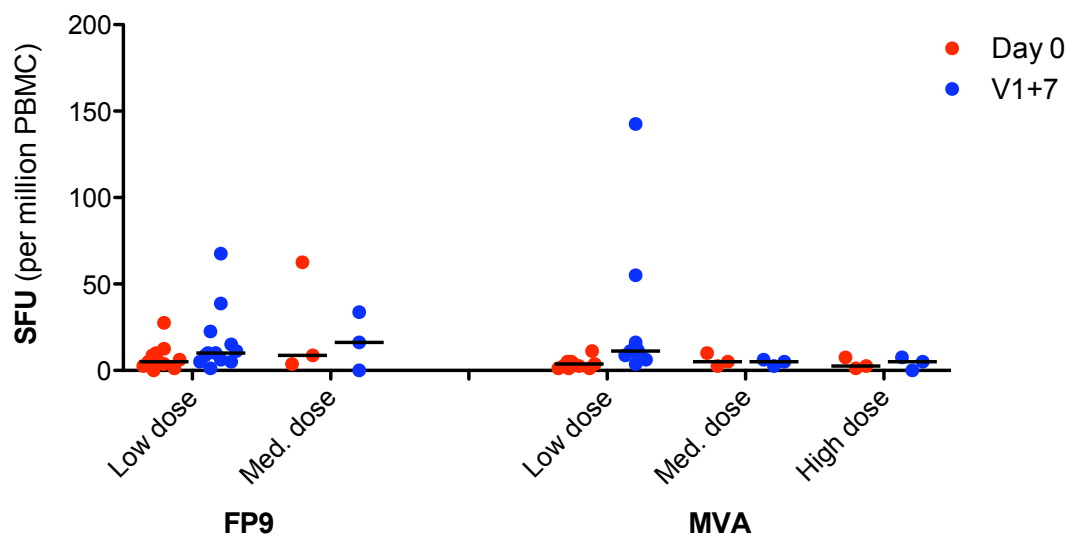
(a)

Description	Group 1: FP9-PP low dose No. volunteers (%) (n = 3)			Group 2: MVA-PP low dose No. volunteers (%) (n = 3)			Group 3: FP9-PP mid dose No. volunteers (%) (n = 3)			Group 4: MVA-PP mid dose No. volunteers (%) (n = 3)			Group 5: MVA-PP high dose No. volunteers (%) (n = 3)		
	Mild	Mod	Severe	Mild	Mod	Severe	Mild	Mod	Severe	Mild	Mod	Severe	Mild	Mod	Severe
Itch	3 (100%)			2 (67%)			3 (100%)			2 (67%)			3 (100%)		
Pain	3 (100%)			3 (100%)			2 (67%)	1 (33%)		2 (67%)	1 (33%)		2 (67%)		
Redness	2 (67%)	1 (33%)		3 (100%)			3 (100%)			3 (100%)			2 (67%)	1 (33%)	
Scaling	3 (100%)			3 (100%)			3 (100%)			3 (100%)			3 (100%)		
Swelling	2 (67%)	1 (33%)		2 (67%)	1 (33%)		1 (33%)	2 (67%)		2 (67%)		1 (33%)	1 (33%)	2 (67%)	
Warmth	3 (100%)			2 (67%)			3 (100%)			2 (67%)			3 (100%)		
Total	16	2	0	15	1	0	15	3	0	14	1	1	14	3	0
Arthralgia	1 (33%)						1 (33%)						1 (33%)		
Documented fever	1 (33%)						1 (33%)						1 (33%)		
Fatigue	3 (100%)									2 (67%)			3 (100%)		
Feverish	2 (67%)						1 (33%)			2 (67%)			3 (100%)		
Headache	2 (67%)			1 (33%)			1 (33%)			3 (100%)					
Malaise	2 (67%)									2 (67%)			1 (33%)		
Myalgia	3 (100%)			1 (33%)			1 (33%)			1 (33%)			2 (67%)		
Nausea										1 (33%)			1 (33%)		
Total	14	0	0	2	0	0	5	0	0	11	0	0	12	0	0

(b)

Description	Group 6 (FFM)									Group 7 (MMF)								
	Vaccine 1 No. volunteers (%) (n = 9)			Vaccine 2 No. volunteers (%) (n = 9)			Vaccine 3 No. volunteers (%) (n = 8)			Vaccine 1 No. volunteers (%) (n = 10)			Vaccine 2 No. volunteers (%) (n = 9)			Vaccine 3 No. volunteers (%) (n = 8)		
	Mild	Mod	Severe	Mild	Mod	Severe	Mild	Mod	Severe	Mild	Mod	Severe	Mild	Mod	Severe	Mild	Mod	Severe
Itch	7 (78%)			5 (56%)			6 (75%)			9 (90%)			9 (100%)			7 (88%)		
Pain	7 (78%)	1 (11%)		6 (67%)	1 (11%)		7 (88%)	1 (13%)		8 (80%)			7 (78%)			5 (63%)	3 (38%)	
Redness	7 (78%)	2 (22%)		4 (44%)	5 (56%)		4 (50%)	4 (50%)		9 (90%)	1 (10%)		6 (67%)	3 (33%)		4 (50%)	4 (50%)	
Scaling	7 (78%)			9 (100%)			6 (75%)			10 (100%)			8 (89%)			6 (75%)		
Swelling	6 (67%)	3 (33%)		6 (67%)	3 (33%)		4 (50%)	4 (50%)		8 (80%)	2 (20%)		5 (56%)	3 (33%)		3 (38%)	5 (63%)	
Warmth	7 (78%)			7 (78%)			8 (100%)			7 (70%)			7 (78%)			7 (88%)		
Total	41	6	0	38	9	0	35	9	0	51	3	0	42	7	0	32	12	0
Arthralgia	3 (33%)			4 (44%)			2 (25%)			2 (20%)			1 (11%)			4 (50%)		
Documented fever	2 (22%)			2 (22%)						2 (20%)						1 (13%)	2 (25%)	
Fatigue	3 (33%)			4 (44%)			2 (25%)			1 (10%)			2 (22%)			2 (25%)		
Feverish	2 (22%)			4 (44%)			2 (25%)			5 (50%)			1 (11%)			6 (75%)		
Headache	2 (22%)	1 (11%)		3 (33%)			2 (25%)			3 (30%)			3 (33%)			5 (63%)		
Malaise	2 (22%)			3 (33%)			3 (38%)			3 (30%)			1 (11%)			5 (63%)		
Myalgia	3 (33%)			6 (67%)			4 (50%)			5 (50%)			2 (22%)			5 (63%)		
Nausea							1 (13%)			1 (10%)			1 (11%)			2 (25%)		
Other													1 (11%)					
Total	17	1	0	26	0	0	16	0	0	22	0	0	11	0	0	30	2	0

Online Table B: **Frequency of vaccine-related AEs.** The number and proportion of volunteers reporting an AE at least once within the first month following vaccination is shown for (a) single dose groups and (b) prime-boost groups



Online Figure A: **Non-specific responses.** *Ex-vivo* IFN γ -ELISPOT responses to culture medium alone at baseline and 7 days following the first vaccination ('D0' and 'V1+7' respectively). Responses are displayed as spot forming units (sfu) per million PBMC. Horizontal lines represent the median.