

Table SI. Disease severity (objective severity SCORing of Atopic Dermatitis (SCORAD) index), *Staphylococcus aureus* density (colony-forming units (CFU)/cm²) and strain distribution (pulsed-field gel electrophoresis (PFGE)) on the skin, in the anterior nares and perineum at visits 1, 2 and 3

Patient ID	Visit	SCORAD	Carriage pattern on lesional skin	Lesional skin		Non-lesional skin		Anterior nares	Perineum	Antibiotic prior to sample
				Strain	CFU/cm ²	Strain	CFU/cm ²	Strain	Strain	
1	1	33.6		C	2.0 × 10 ³	C	1.8 × 10 ²	-	C	No
	2	26.0	Persistent	C	1.1 × 10 ³	-	-	C	C	No
	3	46.5		C	2.4 × 10 ⁴	-	-	C	C	No
2	1	29.6	Persistent	A	7.6 × 10 ³	A	5.5 × 10 ¹	K	-	No
	2	40.0		A	3.7 × 10 ⁶	A	4.2 × 10 ²	K	-	No
	3	44.2		A+B	2.4 × 10 ⁵	A+nt	3.6 × 10 ²	B	B	No
3	1	23.0	Intermittent	-	-	-	-	I	-	No
	2	22.6		-	-	-	-	I	-	No
	3	8.2		L	9.1 × 10 ²	-	-	I	-	No
4	1	20.0	Persistent	-	-	C	2.0 × 10 ¹	C	C	No
	2	19.3		C	1.8	C	1.8	C	-	No
	3	27.5		C	9.1 × 10 ¹	C	1.5 × 10 ²	M	C	No
5	1	34.3	Persistent	D	5.5 × 10 ³	E	1.8 × 10 ¹	-	-	No
	2	38.9		D	1.3 × 10 ⁴	D	2.4 × 10 ¹	-	-	No
	3	51.5		D+E	3.6 × 10 ⁵	D	3.5 × 10 ²	-	D	No
7	1	18.5	Non-carrier	-	-	-	-	nt	-	No
	2	7.4		-	-	-	-	nt	-	No
	3	14.8		-	-	tnp	3.5 × 10 ¹	C	-	No
8	1	44.0	Persistent	F	9.5 × 10 ⁶	F	3.6 × 10 ¹	F	F	No
	2	55.4		F	4.5 × 10 ⁶	F	3.6 × 10 ¹	F	-	No
	3	30.5		F	9.6 × 10 ⁷	F	1.8 × 10 ²	-	-	No
9	1	33.9	Persistent	G	7.3 × 10 ³	G	1.1 × 10 ¹	G+T	-	No
	2	55.1		G	3.5 × 10 ⁶	G	1.4 × 10 ²	G	-	No
	3	48.3		G	1.7 × 10 ⁶	-	-	G	-	No
10	1	16.0	Single observation	-	-	tnp	1.8	U	-	No
	2	na		na	na	na	na	na	na	No
	3	na		na	na	na	na	na	na	No
11	1	12.3	Intermittent	C	2.0 × 10 ¹	tnp	1.8	C	-	No
	2	38.2		-	-	-	-	-	-	No
	3	26.2		-	-	tnp	4.0 × 10 ¹	C	-	No
12	1	8.4	Non-carrier	-	-	-	-	-	-	No
	2	na		na	na	na	na	na	na	No
	3	27.1		-	-	tnp	1.5 × 10 ²	-	-	Yes ^a
13	1	15.9	Non-carrier	-	-	-	-	G	-	No
	2	15.8		-	-	tnp	1.8	G	-	No
	3	22.8		-	-	tnp	1.8 × 10 ¹	G	-	No
14	1	13.4	Non-carrier	-	-	tnp	3.8 × 10 ¹	-	-	No
	2	14.1		-	-	-	-	-	-	No
	3	25.2		-	-	tnp	3.6 × 10 ¹	-	tnp	No
15	1	47.4	Persistent	C	1.2 × 10 ⁶	G	5.5 × 10 ¹	C	C	No
	2	39.8		C+G	7.5 × 10 ⁵	C	1.8	C	C	No
	3	46.8		C	2.7 × 10 ⁵	C	9.1	-	C	No
16	1	37.3	Persistent	C	16	C	9.1 × 10 ¹	C	-	No
	2	28.9		C	1.8	C	3.6 × 10 ¹	-	-	No
	3	17.0		-	-	-	-	C	C	No
17	1	41.7	Persistent	-	-	-	-	V	-	No
	2	56.3		B	1.6 × 10 ⁴	-	-	-	B	No
	3	67.8		B	1.3 × 10 ⁵	B	5.5 × 10 ³	B+V	B	Yes ^a
18	1	27.4	Changed strain	C	3.8 × 10 ¹	-	-	-	-	No
	2	39.7		Q	4.0 × 10 ²	C	1.5 × 10 ²	C	Q	Yes ^a
	3	32.7		Q	1.3 × 10 ²	-	-	Q	Q	No
19	1	28.3	Persistent	R	3.8 × 10 ⁶	R	1.3 × 10 ³	X	R	No
	2	52.8		R	1.4 × 10 ⁷	R	5.5 × 10 ⁴	X	R	No
	3	62.7		R	8.9 × 10 ⁶	-	-	-	R	No
20	1	8.9	Non-carrier	-	-	tnp	1.3 × 10 ¹	-	-	No
	2	13.5		-	-	-	-	-	-	No
	3	8		-	-	-	-	-	-	No
21	1	58.9	Changed strain	S	1.9 × 10 ⁶	S	5.5	S	S	No
	2	51.0		-	-	-	-	-	-	Yes ^a
	3	22.7		N	3.6 × 10 ¹	-	-	-	-	No
22	1	26.9	Persistent	C	5.7 × 10 ⁴	-	-	-	-	No
	2	13.4		-	-	-	-	-	-	No
	3	8.4		C	4.0 × 10 ⁵	-	-	-	-	No

^aPatient 12 suffered a soft tissue infection at the site of an injury and was unable to attend visit 2. The infection was treated with an oral antibiotic, not specified by the patient. Patient 17 flared 1 month prior to visit 3 without contacting the study investigators and received oral flucloxacillin for 10 days. Patient 18 underwent surgical excision of a lipoma 2 weeks prior to visit 2 and was prescribed oral flucloxacillin for 2 days as prophylactic treatment by the surgeon. Patient 21 flared 2 months prior to visit 2 and received oral clindamycin for 14 days after telephone counselling.

--: No strain found; nt: non-typeable isolate; tnp: isolate present but typing not performed; na: not available.