

SUPPLEMENTARY TABLES

Supplementary table 1. Frequency of *spa*-types in nose and skin

<i>Spa</i>-type	All isolates current study, n (%)	Nose isolates current study, n (%)	Skin isolates current study, n (%)	World frequency(1), (%)	Nasal isolates in general European population, (%)	Skin isolates in AD populations, (%)
t002	30 (10,3)	15 (9,6)	15 (11,3)	6,6		2,7(2) 5,0(3)
t005	4 (1,4)	2 (1,3)	2 (1,5)	0,7	2,8(4)	
t008	13 (4,5)	8 (5,1)	5 (3,8)	5,9	5,1(4)	5,1(3)
t012	2 (0,7)	1 (0,6)	1 (0,8)	1,5	8,4(5) 6,2(4) 5,2(6)	2,2(3)
t015	4 (1,4)	4 (2,5)	-	1,0	4,6(4)	0,1(3)
t019	1 (0,3)	1 (0,6)	-	1,0		
t021	11 (3,8)	6 (3,8)	5 (3,8)	1,1	4,0(4)	
t024	1 (0,3)	-	1 (0,8)	0,7		
t026	5 (1,7)	3 (1,9)	2 (1,5)	0,5		0,1(3)

t050	1 (0,3)	1 (0,6)	-	0,2		
t065	3 (1,0)	2 (1,3)	1 (0,8)	0,5	4,9(5)	6,2(3)
t084	14 (4,8)	6 (3,8)	8 (6,0)	1,7	7,6(5) 7,7(6)	2,7(2) 5,4(3)
t091	23 (7,9)	14 (8,9)	9 (6,8)	1,0	5,2(4) 6,1(6)	1,0(3)
t100	3 (1,0)	2 (1,3)	1 (0,8)	0,0		
t127	22 (7,6)	12 (7,6)	10 (7,5)	2,6		13,9(2) 2,1(3)
t1293	1 (0,3)	1 (0,6)	-	0,0		
t1307	1 (0,3)	-	1 (0,8)	0,0		
t1346	5 (1,7)	3 (1,9)	2 (1,5)	0,0		
t1451	1 (0,3)	1 (0,6)	-	0,2		
t148	5 (1,7)	2 (1,3)	3 (2,3)	0,3		2,7(2)
t1504	2 (0,7)	2 (1,3)	-	0,0		
t160	7 (2,4)	3 (1,9)	4 (3,0)	0,3		
t1601	1 (0,3)	1 (0,6)	-	0,0		
t164	4 (1,4)	2 (1,3)	2 (1,5)	0,2		11,1(2)
t189	18 (6,2)	7 (4,5)	11 (8,3)	0,6		19,4(2) 3,0(3)

t1994	4 (1,4)	2 (1.3)	2 (1.5)	0,0		
t216	3 (1,0)	2 (1.3)	1 (0.8)	0,4		
t2246	3 (1,0)	2 (1.3)	1 (0.8)	0		
t230	6 (2,1)	2 (1.3)	4 (3,0)	0,4		
t275	2 (0,7)	2 (1.3)	-	0,1		
t2973	3 (1,0)	1 (0.6)	2 (1.5)	0,0		
t346	9 (3,1)	4 (2,5)	5 (3,8)	0,3		2,7(2) 1,0(3)
t363	4 (1,4)	2 (1.3)	2 (1.5)	0,1		
t369	1 (0,3)	1 (0.6)	-	0,0		
t398	4 (1,4)	2 (1.3)	2 (1.5)	0,1		
t445	2 (0,7)	2 (1.3)	-	0,0		
t458	2 (0,7)	-	2 (1.5)	0,1		
t491	1 (0,3)	1 (0.6)	-	0,1		1,0(3)
t5078	1 (0,3)	1 (0.6)	-	0,0		
t559	2 (0,7)	1 (0.6)	1 (0.8)	0,0		
t571	19 (6,6)	10 (6,4)	9 (6,8)	0,4		

t6587	1 (0,3)	1 (0.6)	-	0,0		
t686	4 (1,4)	2 (1.3)	2 (1.5)	0,0		
t693	2 (0,7)	1 (0.6)	1 (0.8)	0,1		
t774	1 (0,3)	1 (0.6)	-	0,1		1,0(3)
t803	5 (1,7)	2 (1.3)	3 (2,3)	0,1		
t837	7 (2,4)	4 (2,5)	3 (2,3)	0,0		
t854	2 (0,7)	2 (1.3)	-	0,0		
t975	1 (0,3)	1 (0.6)	-	0,0		
t9252	3 (1,0)	2 (1.3)	1 (0.8)	-		
t9253	4 (1,4)	2 (1.3)	2 (1.5)	-		
t9254	1 (0,3)	-	1 (0.8)	-		
t19255	4 (1,4)	2 (1.3)	2 (1.5)	-		
unknown1	1 (0,3)	-	1 (0.8)	-		
unknown2	1 (0,3)	-	1 (0.8)	-		
Sample missing	5 (1,7)	3 (1,9)	2 (1.5)	-		
Total	290 (100,0)	157 (100,0)	133 (100,0)	-		

Column 2, 3 and 4 represent data from this present study and are collected during both time-points. The marked cells represent the five most common spa-types. Column 5 represent the world's prevalence of *spa*-types as registered by the *ridom spa-server*. Column 6 represents the prevalence of spa-types in the nose as described by previous publications on the presence in the general European populations. Column 7 represents the prevalence of spa-types on the skin as described by previous publications on the presence in AD populations

Supplementary table 2. *Staphylococcus aureus* load in nose and skin at both time-points

	T0	T1	P-value ¹
Nose n(%)			P<0.03
Load 1	19 (24.4)	21 (27.3)	
Load 2	31 (39.7)	33 (42.9)	
Load 3	26 (33.3)	18 (23.4)	
Load 4	2 (2.6)	5 (6.5)	
<i>Total</i>	78	77	
Skin n(%)			P=0.04
Load 1	22 (31.4)	24 (38.7)	
Load 2	24 (34.3)	30 (48.4)	
Load 3	16 (22.9)	7 (11.3)	
Load 4	8 (11.4)	1 (1.6)	
<i>Total</i>	70	62	
<p>Abbreviations: n, number; T0, time-point at baseline; T1, time-point two weeks after baseline.</p> <p>Results on <i>S. aureus</i> load were determined using bacterial semi-quantitative cultures and reported on a categorical scale ranging from 0 (negative) to 4 (strongly positive).</p> <p>¹ Statistical testing was performed using a Chi-square test</p>			

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