

Atopic Dermatitis: Molecular Alterations between Lesional and Non-Lesional Skin Determined Noninvasively by In Vivo Confocal Raman Microspectroscopy

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Supplementary Table S1. Demographics and lesions of all recruited AD patients (AD: atopic dermatitis; F: female, M: male; I: infancy (aged 0–2), C: childhood (aged 3–13), PA: puberty/adulthood (aged ≥14); EASI: Eczema Area and Severity Index (4 numbers from left to right: erythema, oedema/papulation, excoriation and lichenification of the lesion); (n)LAS: (non)lesional atopic skin).

Patient-ID	Age	Sex	AD age onset	Skin Type	Number of lesions	Local EASI score	LAS profiles	nLAS profiles	Excluded profiles with reason of exclusion
1	37	M	I	II	1	1 1 0 1	6	6	LAS: ambiguity between LAS/nLAS
2	31	M	I	II	1	2 1 1 0	6	6	LAS: ambiguity between LAS/nLAS
3	53	M	C	II	1	2 1 1 0	6	6	
4	38	F	I	II	2	2 1 1 0 / 1 1 0 0	4 / 2	6	
5	31	F	PA	II	1	1 1 0 0	6	6	
6	48	F	C	II	2	2 0 0 0 / 1 0 0 0	3 / 3	6	LAS + nLAS: use of cortisone prior to measurement
7	28	F	I	II	2	2 1 3 0 / 2 1 2 0	5 / 1	6	
8	55	M	I	III	2	1 1 0 0 / 2 1 0 0	4 / 2	6	LAS + nLAS: use of cortisone prior to measurement
9	20	M	I	II	2	2 1 2 1 / 3 1 0 0	3 / 3	6	
10	46	M	I	II	2	2 0 0 0 / 2 0 0 0	3 / 3	6	
11	29	M	C	II	1	2 1 1 0	6	6	
12	22	M	C	II	3	2 1 2 0 / 1 0 0 0 / 2 1 1 0	3 / 3 / 2	6	LAS + nLAS: instability/movement during measurement
13	29	M	I	III	1	1 0 0 0	6	6	LAS + nLAS: ambiguity between LAS/nLAS
14	40	M	C	III	2	2 1 1 1	3	6	nLAS: ambiguity between nLAS/LAS
15	31	M	I	II	2	1 0 1 0 / 0 1 0 1	3 / 3	6	LAS + nLAS: use of cortisone prior to measurement
16	37	F	C	III	2	2 0 0 0 / 2 2 1 1	4 / 4	6	LAS + nLAS: instability/movement during measurement
17	35	F	I	III	1	1 1 0 0	6	6	LAS: instability/movement during measurement
18	32	F	I	III	2	2 1 0 0 / 1 1 0 0	6 / 1	6	
19	33	F	I	III	1	2 1 0 0	6	6	nLAS: ambiguity between nLAS/LAS
20	23	F	C	III	2	1 0 1 0 / 2 1 0 1	3 / 4	6	
21	23	M	I	III	1	2 1 1 1	6	6	

Supplementary Table S2. Demographics and lesions of the AD patients after exclusion of inadequate profiles indicating successful SC-Th determination (AD: atopic dermatitis, SC-Th: stratum corneum thickness; F: female, M: male; I: infancy (aged 0–2), C: childhood (aged 3–13), PA: puberty/adulthood (aged ≥14); EASI: Eczema Area and Severity Index (4 numbers from left to right: erythema, oedema/papulation, excoriation and lichenification of the lesion); (n)LAS: (non)lesional atopic skin).

Patient-ID	Age	Sex	AD age onset	Skin Type	Number of lesions	Local EASI score	LAS profiles	nLAS profiles	LAS with SC-Th	nLAS with SC-Th
1	37	M	I	II	0		0	6	0	2
2	31	M	I	II	0		0	6	0	4
3	53	M	C	II	1	2 1 1 0	6	6	4	3
4	38	F	I	II	2	2 1 1 0 / 1 1 0 0	4 / 2	6	2 / 2	4
5	31	F	PA	II	1	1 1 0 0	6	6	6	6
6	28	F	I	II	2	2 1 3 0 / 2 1 2 0	5 / 1	6	2 / 1	6
7	20	M	I	II	2	2 1 2 1 / 3 1 0 0	3 / 3	6	0 / 3	4
8	46	M	I	II	2	2 0 0 0 / 2 0 0 0	3 / 3	6	2 / 1	6
9	29	M	C	II	1	2 1 1 0	6	6	2	6
10	40	M	C	III	1	2 1 1 1	3	0	0	0
11	35	F	I	III	0		0	6	0	5
12	32	F	I	III	2	2 1 0 0 / 1 1 0 0	6 / 1	6	4 / 0	6
13	33	F	I	III	1	2 1 0 0	6	0	5	0
14	23	F	C	III	2	1 0 1 0 / 2 1 0 1	3 / 4	6	1 / 4	6
15	23	M	I	III	1	2 1 1 1	6	6	4	5

Supplementary Table S3. The detailed local EASI (Eczema Area and Severity Index) parameters of each atopic lesion used for the analysis after exclusion.

Lesion number	Erythema	Oedema/Papulation	Excoriation	Lichenification	Sum
1	2	1	1	0	4
2	2	1	1	0	4
3	1	1	0	0	2
4	1	1	0	0	2
5	2	1	3	0	6
6	2	1	2	0	5
7	2	1	2	1	6
8	3	1	0	0	4
9	2	0	0	0	2
10	2	0	0	0	2
11	2	1	1	0	4
12	2	1	1	1	5
13	2	1	0	0	3
14	1	1	0	0	2
15	2	1	0	0	3
16	1	0	1	0	2
17	2	1	0	1	4
18	2	1	1	1	5