**Supplement 7: Spearman Correlation in children (age group 2 - 12) between prominent changes in microbiome (genus level) and clinical skin parameters from right forearm after 3 months of intervention (\*\* p < .01)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | After 3 months of BSD | | | | | After 3 months of DAC | | | | |
| **Changes in microbiome** | Δ*Md* | TEWL | SCH | PH | EASI | Δ*Md* | TEWL | SCH | PH | EASI | |
| Brachybacterium | 0,00 | .14 | -.08 | .06 | .83\*\* | 0,01 | .23 | .42 | .07 | .08 | |
| Corynebacteriaceae | -0,01 | .15 | -.16 | .15 | .19 | 0,05 | .58\* | .01 | .35 | .73\*\* | |
| Dermacoccus | 0,00 | -.19 | -.52 | -.05 | .09 | 0,00 | -.08 | -.70\* | .77\*\* | .04 | |
| Kocuria | 0,03 | -.54 | .08 | .67\* | .10 | 0,41 | .38 | -.19 | .41 | .48 | |
| Massilia | 0,03 | .07 | -.07 | -.15 | .86\*\* | 0,01 | .31 | -.10 | -.13 | -.06 | |
| Microbacterium | 0,00 | .06 | -.34 | .32 | .76\*\* | 0,07 | .02 | .10 | -.07 | -.33 | |
| Moraxellaceae | 0,13 | -.11 | -.31 | .07 | .78\*\* | -0,05 | -.43 | -.53 | -.02 | -.32 | |
| Nocardioides | 0,00 | .18 | -.13 | .00 | .77\*\* | 0,32 | .31 | .10 | .05 | -.08 | |
| Oxalobacteraceae | 0,00 | .09 | -.15 | -.19 | .76\*\* | 0,02 | .04 | -.29 | -.11 | -.14 | |
| Prochlorotrichaceae | 0,07 | .30 | -.21 | -.26 | .12 | -0,32 | .28 | .74\*\* | -.58\* | -.28 | |
| Roseobacteraceae | 0,08 | -.09 | .69\* | -.05 | -.04 | 0,00 | .08 | -.15 | -.39 | -.09 | |
| Rubellimicrobium | 0,00 | .57 | -.16 | -.40 | -.34 | 0,03 | .00 | .78\*\* | -.77\*\* | -.14 | |
| *N* =11; Δ*Md* = Changes in Median; \* *p* < .05, \*\* *p* < .01 | | | | | | | | |  |  | |

**Supplement 7: legend:**

Spearman correlation coefficients examining the relationship between prominent changes in microbiome and clinical skin parameters on the right forearm after a 3-months intervention for the age group 2-12 (\*\* *p* < .01). In addition, ΔMd shows whether and how the median percentage of reads of the bacterial genus has changed after 3 months of intervention.

Both the bacteria with significant changes in children or adults are listed.