**Supplement 8: Spearman Correlation in adults (age group 18 - 65) between changes in microbial colonization and clinical skin parameters of right forearm after 3 month of intervention**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | After 3 month of BSD | | | | | After 3month of DAC | | | | |
| Changes in microbiom | Δ*Md* | TEWL | SCH | PH | EASI | Δ*Md* | TEWL | SCH | PH | EASI |
| Brachybacterium | -0,04 | -.18 | -.02 | -.39 | -.03 | 0,00 | .32 | .45 | -.20 | -.12 |
| Corynebacteriaceae | 0,03 | .24 | -.06 | -.15 | .02 | -0,07 | .14 | .35 | -.05 | -.17 |
| Dermacoccus | -0,03 | -.48 | -.02 | .09 | .28 | -0,03 | -.61\* | -.41 | .50 | .20 |
| Kocuria | 0,01 | -.13 | .654\*\* | -.26 | -.30 | -0,75 | -.40 | -.15 | .27 | .37 |
| Massilia | 0,00 | .21 | -.05 | .21 | -.01 | 0,00 | .30 | -.34 | -.19 | .56\* |
| Microbacterium | 0,00 | -.32 | .19 | .03 | -.19 | 0,00 | -.36 | -.52\* | .54\* | .42 |
| Moraxellaceae | 0,00 | -.24 | .07 | -.11 | -.14 | 0,04 | .08 | -.60\* | .02 | .53\* |
| Nocardioides | -0,03 | -.35 | -.13 | -.01 | .36 | 0,00 | .14 | -.31 | .45 | .33 |
| Oxalobacteraceae | 0,00 | -.44 | -.07 | -.10 | .04 | 0,00 | .32 | -.31 | .07 | .38 |
| Prochlorotrichaceae | 0,00 | -.31 | -.12 | -.35 | -.04 | 0,00 | -.26 | -.14 | .09 | .00 |
| Roseobacteraceae | 0,00 | .04 | -.40 | -.10 | .18 | 0,01 | -.32 | -.69\*\* | .11 | .37 |
| Rubellimicrobium | 0,00 | -.42 | -.08 | -.09 | .16 | 0,00 | -.29 | -.04 | .38 | -.01 |

*N*=15; Δ*Md* = Changes in Median; \* *p* < .05, \*\* *p* < .01

**Supplement 8 legend:**

Spearman correlation coefficients investigating the relationship between prominent changes in microbial colonization and clinical skin parameters on the right forearm after a 3-month intervention for the age group 18-65. ΔMd shows whether and how the median percentage of reads of the bacteria genus have changed after 3 months of intervention. Both the bacteria with significant changes in children or adults are listed.