Table 4 **The abundance of the most common microbial groups at the phylum/family levels (in %).**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Phylum** | | **Family** | **Healthy** | | | **Diseased** | | | | | |
| **SH** | **PH1** | **PH14** | **SD** | **PD** | **PID** | **SS** | **PIS** |
| **Cyanobacteria** | | Chlorophyta symbiont of *Lubomirskia* sp. | 84.15 | 77.3 | 74.85 | 9.34 | 1.76 | 0.76 | 2.41 | 21.9 |
| Cyanobiaceae | 5.04 | 4.43 | 0.41 | 0 | 0.2 | 0 | 0 | 0 |
| Pseudanabaenaceae | 0 | 0 | 0 | 10.63 | 0 | 0 | 7.32 | 0 |
| **Bacteroidetes** | | Flavobacteriaceae | 0.48 | 0.8 | 0.32 | 20.04 | 62.04 | 32.56 | 36.47 | 12.67 |
| Crocinitomicaceae | 0.15 | 0 | 0 | 0.93 | 0.07 | 17.32 | 18.03 | 0 |
| NS11-12 marine group | 0 | 0.34 | 0 | 1.36 | 0.16 | 4.13 | 0.88 | 25.55 |
| Chitinophagaceae | 4.56 | 7.18 | 17.61 | 10.34 | 1.19 | 0.15 | 6.44 | 0.32 |
| Spirosomaceae | 0 | 0 | 0 | 2 | 0.83 | 0.18 | 2.27 | 0.92 |
| Sphingobacteriaceae | 0 | 0 | 0 | 0 | 0.41 | 0.2 | 3.1 | 1.36 |
| Env. OPS 17 | 0 | 0 | 0 | 11.91 | 0.1 | 0 | 0.7 | 0 |
| Unclassify Bacteroidetes | 0.19 | 0 | 0 | 1.28 | 0.13 | 0 | 4.54 | 0 |
| **Proteobacteria** | **α** | Rhodobacteraceae | 0 | 0 | 0 | 3.71 | 0.57 | 0.04 | 1.62 | 0.12 |
| Sphingomonadaceae | 3.34 | 7.01 | 5.31 | 0.78 | 0.1 | 0.12 | 0.42 | 0.45 |
| Terasakiellaceae | 0.82 | 0.75 | 0.93 | 6.63 | 0.18 | 0 | 0.19 | 0 |
| **β** | Burkholderiaceae | 1.26 | 2.18 | 0.57 | 19.33 | 25.65 | 19.79 | 14.92 | 14.26 |
| **γ** | Moraxellaceae | 0 | 0 | 0 | 0.14 | 0.75 | 22.19 | 0.7 | 9.57 |
| Pseudomonadaceae | 0 | 0 | 0 | 0 | 3.07 | 2.56 | 0 | 0.32 |
| Aeromonadaceae | 0 | 0 | 0 | 0 | 2.8 | 0 | 0 | 0 |
| **δ** | Nannocystaceae | 0 | 0 | 0 | 1.57 | 0 | 0 | 0 | 8.63 |
| **Dependentiae** | | Vermiphilaceae | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.92 |