Supplementary Materials

Three additive models were run initially. The first examined health status categorized as healthy, remission and AOD symptomatic. Remission trees were then included first with the symptomatic group and secondly with the healthy group and further analyses run.

Supplementary Table 1: ANOVA results of additive mixed effect models of abundance scores for AOD-associated bacteria. Random effect was the sample number, fixed effects were drying method (silica gel or plant press), tissue (leaf or bud), bacterial species, age category (semi-mature, mature, over-matue), site, and health status (categorised three different ways). No significant differences were found between healthy, AOD symptomatic and remission trees whether analysed as three groups or with remission trees included with healthy or with symptomatic groups. Site shows a significant F value of over 3 in the one-read scoring but not the ten-read scoring.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Categories:  AOD Symptomatic, Remission, Asymptomatic | | Categories:  AOD Symptomatic + Remission;  Asymptomatic | | Categories:  AOD Symptomatic;  Asymptomatic + Remission | |
|  |  | F | P | F | P | F | P |
| A) One-read scoring | Drying  Method | 11.42 | **<0.0001** | 11.41 | **<0.0001** | 11.44 | **<0.0001** |
| Tissue | 24.42 | **<0.0001** | 24.38 | **<0.0001** | 24.46 | **<0.0001** |
| Age | 16.97 | **<0.0001** | 16.96 | **<0.0001** | 17.00 | **<0.0001** |
| Bacterial Species | 21.15 | **<0.0001** | 21.2 | **<0.0001** | 21.19 | **<0.0001** |
| Site | 3.25 | **0.022** | 3.25 | 0.022 | 3.25 | 0.022 |
| Health status | 0.34 | 0.712 | 0.01 | 0.937 | 0.6 | 0.439 |
|  |  |  |  |  |  |  |  |
| B) Ten-read scoring | Drying Method | 2.864 | 0.062 | 2.89 | 0.061 | 2.891 | 0.06 |
| Tissue | 13.774 | **<0.0001** | 13.897 | **<0.0001** | 13.905 | **<0.0001** |
| Age | 0.298 | 0.743 | 0.3 | 0.741 | 0.301 | 0.741 |
| Bacterial Species | 2.952 | 0.059 | 2.979 | 0.057 | 2.98 | 0.057 |
| Site | 1.765 | 0.16 | 1.781 | 0.157 | 1.78 | 0.157 |
| Health status | 0.033 | 0.967 | 0.001 | 0.977 | 0.06 | 0.807 |

Supplementary Table : R packages

|  |  |  |  |
| --- | --- | --- | --- |
| **Package Name** | **Version** | **Maintainer** | **Reference** |
| ggthemes | 4.2.0 | Jeffrey B. Arnold jeffrey.arnold@gmail.com | 69 |
| Rmisc | 1.5 | Ryan M. Hope rmh3093@gmail.com | 84 |
| lattice | 0.20.38 | Deepayan Sarkar deepayan.sarkar@r-project.org | 85 |
| gridExtra | 2.3 | Baptiste Auguie baptiste.auguie@gmail.com | 70 |
| nlme | 3.1.137 | R-core R-core@R-project.org | 56 |
| ggbiplot | 0.55 | Vincent Q. Vu vqv@stat.cmu.edu | 68 |
| scales | 1.1.0 | Hadley Wickham hadley@rstudio.com | 69 |
| plyr | 1.8.5 | Hadley Wickham hadley@rstudio.com | 76 |
| dplyr | 0.8.5 | Hadley Wickham hadley@rstudio.com | 81 |
| tibble | 2.1.3 | Kirill Müller krlmlr+r@mailbox.org | 73 |
| ggplot2 | 3.2.1 | Hadley Wickham hadley@rstudio.com | 80 |
| forcats | 0.5.1 | Hadley Wickham hadley@rstudio.com | 75 |
| stringr | 1.4.0 | Hadley Wickham hadley@rstudio.com | 77 |
| purr | 0.3.4 | Lionel Henry lionel@rstudio.com | 72 |
| readr | 1.4.0 | Jim Hester james.hester@rstudio.com | 82 |
| tidyr | 1.1.3 | Hadley Wickham hadley@rstudio.com | 78 |
| Tidyverse | 1.3.1 | Hadley Wickham hadley@rstudio.com | 79 |
| Cowplot | 1.1.1 | Claus O. Wilke wilke@austin.utexas.edu | 71 |