

Meeting October 1st

Research question

- What species of microbes are changing in MS patients with an increase in age and severity? Aims are as follow:
- Do for one city to narrow down the samples
 1. Correlation between age and severity
 - Group between male and female patients
 2. Correct for TD2 and smoking to get rid of factors that may impact microbial diversity (could be 2nd aim to eliminate confounding variables)
 3. Look at alpha and beta diversity (PCA plot, group by age colour severity) for each age group and different severity
 4. Microbes researched can then be correlated to inflammation
 - Inflammatory microbes to tie into literature
 - Do the inflammatory microbes vary between patients with other variables
 5. Random forest if time

To start off:

1. Trim down manifest before qiime2
2. Figure how many samples relevant (ideal sample size in the hundreds)
 - Make a revised manifest
3. All figures are needed for the proposal
 - Chris can look at some of the files at meetings

Action items

1. Generating a new manifest files after trimming data
 - Pick a city with more than 100 samples and filter other factors as discussed
2. Start writing proposal (due the 20th)
 - Divide the aims for all 5 members to write
- MS severity and different microbial differences
 - Eg: age component and lifestyle (smoking)
 - Does smoking result in a change in microbiomes independent of age in MS patients?
3. More formal agenda for next meeting