Group meeting [February 4th 2026]

Parties present:

Claire
Alex
Ryan
Howard
David
Soroush

Agenda:

- Review feedback for Group Assignment 1.
- Recap the state of our project (i.e., what do we have so far).
    - Processing of data (QIIME2/PICRUSt2).
    - Literature review findings.
- Discuss & formalize our use of GitHub.
    - Who can edit what? (so we don't overwrite each others' work)
    - Meeting notes on what software? Uploaded by who? by when?
- Plan project next steps - roadmap tasks & rough deadlines.
    - Assign tasks?

Meeting Minutes (taken by Howard):

Feedback for group assignment:

- Good directory organization
- Q1a:
    - RQ sounds good
    - When talking about RQ → be careful of wording in regards to causation vs correlation
    - We are working with observationary datasets
- Q1b
    - Descriptions for parameters were good → good detail
- Q1c:
    - good description of paper
- Q2:
    - Truncation length → made sense
    - Q2f:
        - Refraction depth → question - why not 5410?
        - Clarified → was looking at after mitochondria etc. removed

        - Good way to double check → look at original paper and what they have chosen
        - They used 5000 reads per sample → pretty close
        - ~25% of total reads retained
            - Some groups that work with a lot more samples → maximise reads more → lose samples doesn't matter that much
            - Bc we have much less samples → makes sense
- Q3:
    - Communicate more frequently → becomes important when working on analysis → pushing on GitHub

State of Project:

- QIIME2 stuff in QIIME folder; all organised; exports folder → for exporting to R
- PieCrust stuff → if used for later analysis → analysis done in R, isn't running PieCrust in R → getting you from 16s taxonomy to functional assignments
- Stuff done in R → doing statistics on alpha table, but still have to work with that alpha table and export that
- PieCrust → exists as tool outside of QIIME → lot more functionality than in QIIME
    - Native PieCrust → get stratified abundance table → function predictions, can get breakdown of how much each taxa is contributing to predicted function
- For now we can just use the QIIME2 outputs
- If we want to use it in the future we can use the Native PieCrust ; for now focus on QIIME2 outputs

Literature Review:

- Mallards → have more effect seen in microbiome changes from influenza compared to other waterfowl species
- H5N1 → seen in swan → dysbiosis → hypothesised that this one would look at this?
- Can look broader → can just look influenza A effect on microbiomes, not necessarily on waterfowls

GitHub:

- Meeting notes and analysis on GitHub
- Practices in place in what we can edit freely and what we can → communication
- Meeting notes on GitHub
    - One group just uploads PDF, txt files etc.
    - Can just export agenda from google docs to GitHub

- At end of semester → should look at GitHub and see all agendas and meeting minutes for different team meetings over the course
    - Don't have to necessarily upload meeting minutes
- **Agenda should be on GitHub the day before**
    - Meeting minutes doesn't rly matter → just before semester end
- As long as things are uploaded to GitHub eventually should be fine
- Description of project structure
    - Agenda vs minutes?
    - Separate them

<u>Planning Project</u>

- Group assignment 2
- Be more clear about assigning work
- Becomes more clear after doing the next module (12-14) → most analysis we are expected to do for the course
- Once watched videos, run example codes → clearer idea of how we can split the work
    - alpha/beta analysis → done in R
- Work with phyloseq(?) → microbiome analysis → can create taxonomic barplots → make them prettier in R
    - Alpha beta also with this package, better plots
    - Statistics
- Proposal
    - Provide basic background information to understand RQ
    - Rationale for why you're researching this → what knowledge it provides for field
    - Group assignment2 goes into this but write up aims, what things you are going to do to address these aims
    - Be correctly cited

<u>Action Items:</u>

- Broader search in literature review
- Planning ahead for group assignment 2
    - Consider meeting during reading break
- Next week focus on planning for aims, picking analysis for group assignment
- Come with idea of what aims are going to be
    - What deadlines will make sense etc.