

Week 3 - Notes

Morphology:

- morphology, in biology, the study of the size, shape, and structure of animals, plants, and microorganisms and of the relationships of their constituent parts. The term refers to the general aspects of biological form and arrangement of the parts of a plant or an animal.
- It is important to know the morphological structure of microbes, as it provides us with a better understanding of microbial physiology, pathogenic mechanisms, antigenic features, and allows us to identify them by species.

We use the 16S rRNA gene to assign taxonomy to bacteria because:

- It is highly conserved, evolving very slowly, which allows for classification of taxa in the highly diverse domain of bacteria

We need so many sequences per sample for gut microbiome research:

- Gut microbial communities are very diverse and must be sampled deeply to be described accurately

Beta diversity:

- A measure of the dissimilarity of microbial communities between two different samples

Dimensionality reduction:

- Finding a new presentation of the data that captures the same patterns in the data in fewer dimensions