**BIOL432 Group Assignment Project Proposal**

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Group members:

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GitHub

**Link to Repository**: <https://github.com/ethancohen432/GroupProject>

* **Repository name**: GroupProject

Biological Questions

* What is the diversity of bacteria within the belly button samples?
  + We plan on addressing this question through the use of a cluster analysis on the OTU table.
* What is the evolutionary relationship between the different species found in one sample (one belly button)?
  + To do this we will look at the cluster analysis and pick one sample with a high diversity of species present and then align the sequences to build a phylogenetic tree.

Description of the dataset

We are utilizing the dataset collected by the authors of the study titled “ A jungle in there: bacteria in belly buttons are highly diverse, but predictable”. The data was collected from two different populations as part of a nation-wide citizen science project with the hopes of examining both bacterial and archeal phylotype diversity within the belly buttons of individuals. The data comes in the form of sequencing data of all 16s rRNAs of each microbe present within each sample.

Citation

Hulcr J, Latimer AM, Henley JB, Rountree NR, Fierer N, Lucky A, et al. (2012) A Jungle in There: Bacteria in Belly Buttons are Highly Diverse, but Predictable. PLoS ONE 7(11): e47712. <https://doi.org/10.1371/journal.pone.0047712>