Graph 1: Original Data

A graph of different colored bars

Description automatically generated

Title: different treatments impacting growth of bacterial species

P val = 0.000634

P val species = < 2e-16

Based off the p val, there is a clear difference in the treatment average levels.

Takeaway: Based off the graph, we can see the most of the species are growing the same, despite different treatments, but S. Mar, P. Flu, and E. Coli have the most extreme growth based off the LB treatment.

Graph 2: New Data

A graph of different colored bars

Description automatically generated

Title: different treatments impacting bacterial growth

P val species = <2e-16

P val treatment= 0.108

* Based off the P value, there is no significant differences in the treatment average levels.

Takeaway:

B. Sub and E. Coli have huge growth under the LB+ S treatment. Bkg should not have grown but it shows that it did grow based off the treatment.

**Are there any differences in the data sets? Especially the controls. Why may there be differences? Which experiment do you “trust” and which is suspicious?**

**I “trust” the first experiment and I think the second experiment is suspicious. Based off what I mentioned before, bkg should not have grown, which makes me doubt the second experiment and its reliability. In the first experiment, there was no growth, which is what I know to be true. Compared to the second experiment, which demonstrated a lot more growth. Also, the growth for S. epi , A. hyd, C.fre, P.flu had extreme growth in the second experiment, but compared to the first one, they did not grow as much.**

**Watch out for differences in spelling (or even spaces) between the two data sets again think about data management and best practices**

Best practices would to make sure that everything is super organized and in uniform otherwise confusion of data sets can occur.