Pseudomonas fluorescens, in the initial experiment, exhibited biphasic growth. This led to our initial hypothesis that high concentrations of glucose in the LB media was enabling the biphasic growth. In our next experiments, we sought to see if this was true. This was done by decreasing the amount of media to better show the biphasic growth. However, these results were inconclusive, but led to a new hypothesis that P. fluorescens can survive high osmotic pressure, with increasing lag times provided by high glucose concentrations. This might be accomplished through the regulation of its genes. In order to test this hypothesis more experiments need to be done on the molecular level to see what allows this microbe to live at such extreme osmotic pressure.

2.0% Glucose (inoculum $10^{-7}$)

Figure 1: The graph illustrates the biphasic growth seen P. fluorescens with 2.0% glucose concentration. This graph was produced during an attempt to produce a better growth curve, either by increasing growth rate, optical density, or decrease lag times. The experiment varied conc. of glucose between .5% and 7.0%. The results of this experiment showed that adding glucose to the LB media may have increased lag times and enabled biphasic growth.

Figure 2: This graph illustrates the results of an experiment that was done to determine the effects of high glucose concentration on growth of P. fluorescens with varying glucose concentrations between .5% and 7.0%. The LB media concentration remained constant in the experiment. With each concentration performed in triplicate.

Figure 3: This graph shows the relationship between the increase in lag times to increasing concentrations of glucose from Figure 2. The higher the concentration of glucose the higher the lag time.