July 31, 2017

Title: Testing for Optimal Fluoride Levels and Dilutions for CHOP Growth

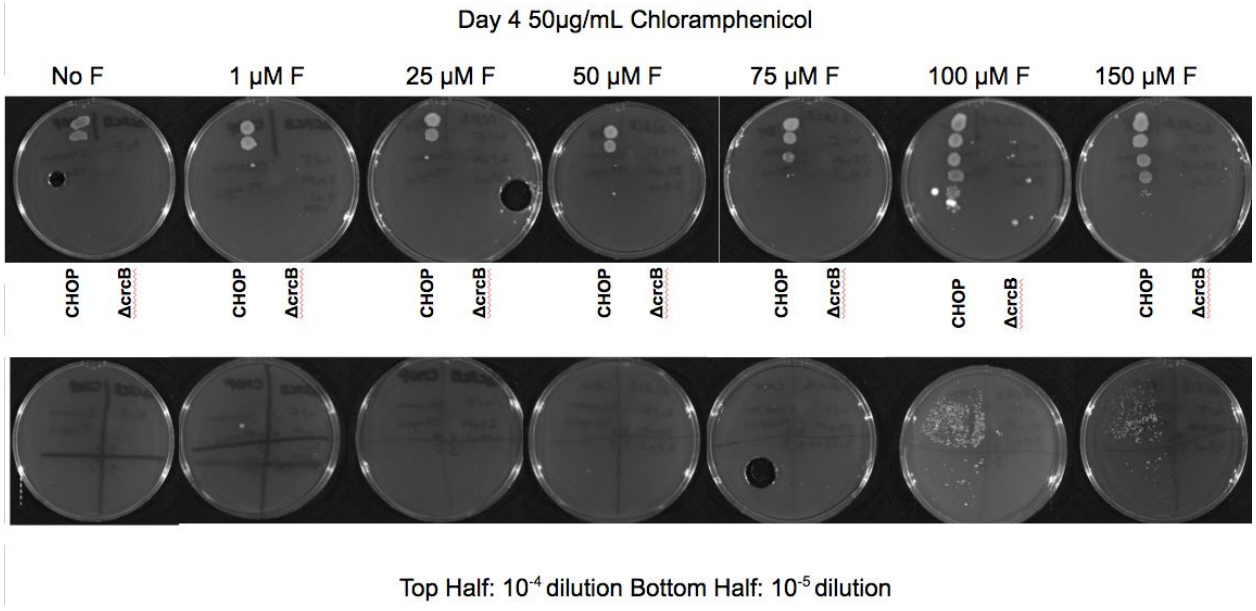
Expected Outcome: The increase of fluoride will increase the growth of CHOP, until a certain point. This experiment will ascertain that point.

Procedure:

I. Make 1 set of plates with no fluoride, 1µM fluoride, 25µM fluoride, 50µM fluoride, 75µM fluoride, 100µM fluoride, 150µM fluoride. Also add 50µg/mL chloramphenicol.
   A. Make serial dilutions of CHOP and ΔCRCB, and plate them
   B. Incubate the plates at 37℃ and image daily

II. Make 1 set of plates with no fluoride, 1µM fluoride, 25µM fluoride, 50µM fluoride, 75µM fluoride, 100µM fluoride, 150µM fluoride. Also add 50µg/mL chloramphenicol.
   A. Divide the plates into 4 quadrants.
   B. Make CHOP at a 10^{-5} dilution and 10^{-4} dilution
   C. On the bottom half of the plates, use a glass spreader to apply the 10^{-5} dilution
   D. Apply the 10^{-4} dilution on the top half using a glass spreader
   E. Incubate the plates at 37℃ and image daily

Results:



Conclusion: Based off the plate images, CHOP is best thrives the most at 100µM fluoride and at a 10^{-4} dilution.