

Homework 1, BIOL689, Due Tuesday, 1/23

Problem 1: This problem has three parts:

1a. Write an abstract of **400 words or less** describing your research interests. You should start with an introductory sentence or two, followed by a description of the problem you would like to solve and how you will overcome it. Finish with a statement of how this work will be significant to your field. This exercise can use your real interests or a hypothetical set of interests (but still related in some way to your intended research).

1b. Enumerate, in **1-2 sentences**, **one** testable hypothesis related to your abstract from 1a. Again, the hypothesis can be a real one you intend to test or a fictional one related to your interests.

1c. Describe, in **4 or fewer sentences**, a **single** experiment you might use to test your hypothesis from question 1b. A basic overview is enough – I'm not expecting great detail here.

Problem 2: Based on the advice from Chapter 2 in Whitlock and Schluter, find a figure in a published paper or on the internet that is flawed. You need to find a figure for which you can obtain the associated data, either by inferring data points from the figure or by retrieving the data from an online database, such as dryad (datadryad.org).

2a. Provide the faulty figure and the reference describing where it came from (paper or website).

2b. Describe what is wrong with the figure in **1-2 sentences**.

2c. Use the dataset associated with the figure to draw a new, better version in R.

2d. Provide your new figure and the R code you used to draw it.