

Due Monday, March 31

## 1 Instructions

1. The goal for this part of the project is to run linear models for some comparisons of interest within your experimental conditions.
2. I want you to run at least 2 comparisons. You can either run models using two different variables, or you can run a model with one variable that has at least 3 levels, and look at relevant contrasts between the levels.
3. For the R code, you should use the limma userguide as well as the code / examples I gave in class.

## 2 Things to put on your web site (next)

- The top ten significant genes for your comparison (use `topTable`). Remember (from above), I want at least two comparisons, so you need at least two lists of top ten genes.
- You should give a description of the “significance” of the genes. That is, I don’t just want p-values, I want you to tell me what it is that these ten genes are able to discriminate. Like I tell my intro students, give the action (reject or not reject), and then state the conclusion in words of the problem.
- Volcano plots for each of the two comparisons. A volcano plot gives a sense of practical versus statistical significance. Additionally, explain what the volcano plots tell you.