

Statistics For Genomics – Reading Assignment 1
Due: April 4th At the Beginning of Class

Read the papers (available from the class website):

- (1) “Common genetic variants account for differences in gene expression among ethnic groups” by Spielman et al.
- (2) The letter, “On the design and analysis of gene expression studies in human populations” by Akey et al.
- (3) The response, “Reply to: On the design and analysis of gene expression studies in human populations” by Spielman and Cheung

Briefly Answer Each of These Questions:

- (1) What percentage of the genes was found to be differentially expressed between the two populations by Spielman et al.? Intuitively, does this number seem believable? Why or why not?
- (2) We discussed the difficulties with the study design employed by Spielman et al. in class. What would have been a better way to design the experiment? Other than study date, what are some other variables that may be important to take into account?
- (3) Do you think the response by Spielman et al. adequately addresses the concerns raised by Akey et al.? Why or why not?