Inheritance and Linkage Disequilibrium

After this module you should be able to explain the following terms and ideas.

KEY TERMS

Recombination, Recombination hot spot, Linkage, Linkage Disequilibrium, Perfect LD, LD-block

What is recombination? Why aren't full chromosomes inherited together?

Is the probability of a recombination occurring between two base pairs constant across the genome? Explain.

What is linkage disequilibrium (LD)? What is an LD-block?

Do you expect LD to increase or decrease between SNPs as they become more distant. Why?

What would you expect the LD to be between two SNPs on different chromosomes? Why?

Assume you collect genetic information and height measurements on many individuals. If you correlate height with SNP-1 you get a correlation coefficient of 0.15. If SNP-2 is in perfect LD with SNP-1 and you correlate height with SNP-2, will you get the same correlation coefficient? Why or why not?