



- 6) Which of the following factors are required for both V(D)J recombination and class switching: RAG1, Ku70, RNA polymerase II, AID (activation-induced cytidine deaminase)?
- 7) Is somatic hypermutation limited to the expressed Ig alleles in a B cell? Design an experiment to find out (extra credit).
- 8) What cellular and molecular interactions are required to activate switch recombination? How is switch recombination regulated?
- 9) Explain how somatic mutation results in increases in antibody affinity during an immune response?
- 10) List the genetic events which must occur properly in order to produce a high-affinity IgG specific for a novel antigen. Name three genetic diseases which interfere with one or several of these events.