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## Answers to Jeremy's Super Duper 7.012 Immunology Quiz

### Nomenclature

antigens  
antibodies  
epitope or antigenic determinant

### Overview of the Immune System

Humoral immune system involves Abs, B cells (also helper T cells and macrophages).  
Cellular or Cell-Mediated

### A Few Words about Antibodies (Abs)

B, Bone Marrow  
4, heavy, light  
disulfide bonds  
VDJ  
VJ  
2

### Humoral Immunity

vacuole or phagolysosome  
MHC II  
B  
MHC II, T<sub>H</sub>, Thymus, T cell receptor  
T cell receptor  
IL-2  
clone, TCR (T cell receptor)  
endocytosed, oligopeptides, vacuole or phagolysosome, MHC II  
Antigen Presenting Cells  
cytokines, clonally expand or proliferate, differentiate

### Plasma Cells

ribosomes?, endoplasmic reticulum?, machines or factories!  
Memory Cells  
directed somatic mutation  
faster and stronger (higher antibody titers)

### Cellular Immunity

MHC I, cytoplasm  
the virus, or viral peptides  
killer T or Cytotoxic T  
clone (or expansion)  
kills, perforin, membrane