

Ig → immunoglobulin

4 polypeptide chains
2 light (L), 2 heavy (H)

classified: IgM, IgG, IgA, IgE, IgD
2 heavy (H)

structural differences in the constant-region domains of the heavy chain



IL-1, IFN- γ , lymphotoxin
enhanced responses to against viruses + intracellular pathogens



IL-4, IL-5, IL-10, IL-13
enhance humoral immunity while suppressing cell-mediated immunity

Interleukins are cytokines that are secreted by leukocytes and act on other leukocytes.

Classified based on what type of immunity they're primarily involved in:

innate

IL-1, IL-6, IL-12, TNF- α , IFN- α

adaptive

IL-2, IL-4, IL-5, IL-10

Plasma cell
antibody-secreting B cell

when confronted with the same antigen, BALB/c mice exhibit a Th2-dominant response and C57BL/6 mice exhibit a Th-1 dominant response

complement system: 40 + chemically immunologically distinct proteins capable of interacting with antibodies, certain bacterial products, + cell membranes

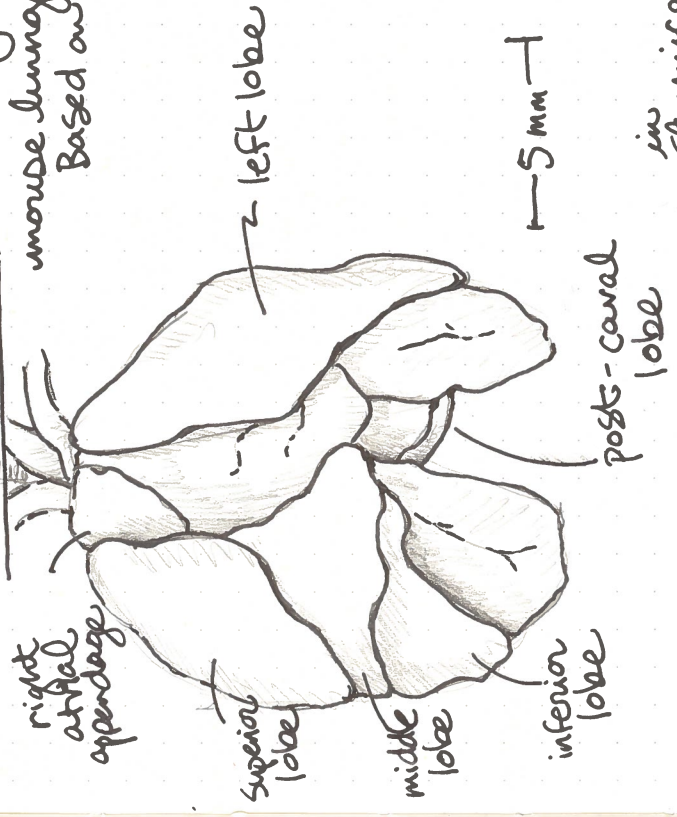
chemokines: along with adhesion molecules are the principle controllers of leukocyte migration and so directly affect leukocyte retention + relocation during hematopoiesis + at sites of immune defense + inflammatory disease

Mouse as a model organism

mouse lungs
Based on Hoyt et al.

5 lobes → 4 left, 1 right

humans are about 3000 times larger than mice



"The inflammatory response of mice, unlike that of most larger animals, is often associated with increased lymphocytes as well as increased neutrophils." - Evans

spleen: filters blood + mediates immune response

In mice but not humans, the spleen serves as a normal site of hematopoiesis throughout life + can provide a hematopoietic response to various stimuli (diseases, infectious agents, tumors, blood loss, anemia)

adult weights of spleen in mice: 100-200 mg, 2-4 months

