Micro Lecture Exam 4 Study Guide

* Review the Powerpoints
* Be familiar with the differences between the innate and adaptive immune system
  + Remember that innate immune system components are found in plants and all animals; adaptive immunity is only found in vertebrate animals
* What are the 3 main cell types that form from a myeloid stem cell?
* Innate immune system
  + What is the first line of defense?
    - i.e skin, stomach acidity, etc
  + What is the second line of defense?
    - i.e cells of the innate immune system (what do neutrophils do?, eosinophils?, basophils? Macrophages? Natural killer cells?)
  + What is complement? What is the MAC? What is opsonization?
  + What are the 4 signs of inflammation?
  + What is a pyrogen?
  + What is normal microbiota? How does a baby acquire normal microbiota?
  + What are toll-like receptors?
  + What are defensins? What are interferons?
* What is the sequence of phagocytosis?
* Adaptive immunity
  + What are B cells? What are the major classes of antibodies?
  + T cells?
    - Cytotoxic T cells
    - Helper T cells
  + What are antigen presenting cells?
  + What is the MHC? What cells express MCH class I? MHC class II?
  + What is the primary response? Secondary response?
  + Why is vaccination important? What is herd immunity?
  + What is active immunization? Passive immunization?
* Review immunological testing techniques
  + What molecule causes the clumping in an agglutination assay?
  + What is a Kirby-bauer test?
* What is the key to picking a successful chemotherapeutic agent?
* What is multi-drug resistance?