

## BIOLOGICAL FRAMEWORKS FOR ENGINEERS

### Session #9 [nm: Immunology]

#### General Objectives:

- ✓ Introduction to components of the immune system
- ✓ Identify and discuss the basis for mutations

#### Central Framework:

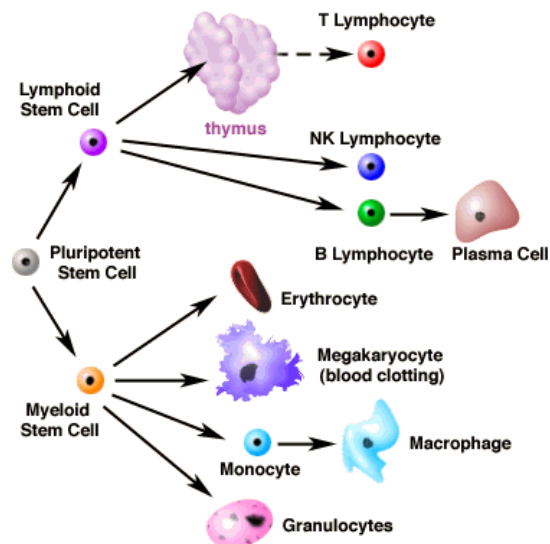
- ✓ The immune response is a coordinated defense action consisting of identification, targeting and removal of foreign materials or organisms

#### Interactive Activity:

- ✓ Worksheet on blood type

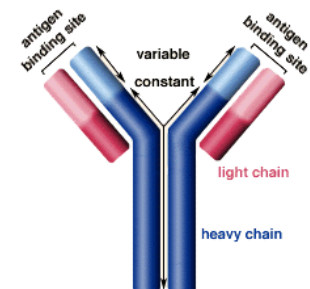
#### Session Outline:

#### I. Cells of the Immune System

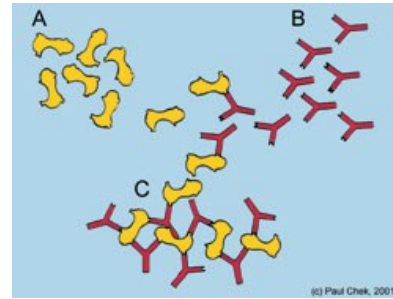


[http://www.drstandley.com/bodysystems\\_immune.shtml](http://www.drstandley.com/bodysystems_immune.shtml)

#### II. Antibodies

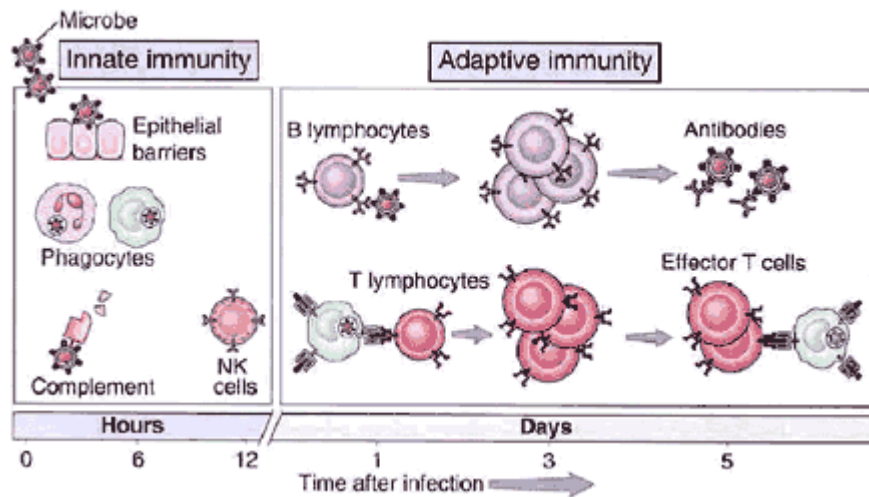


III. Antigens



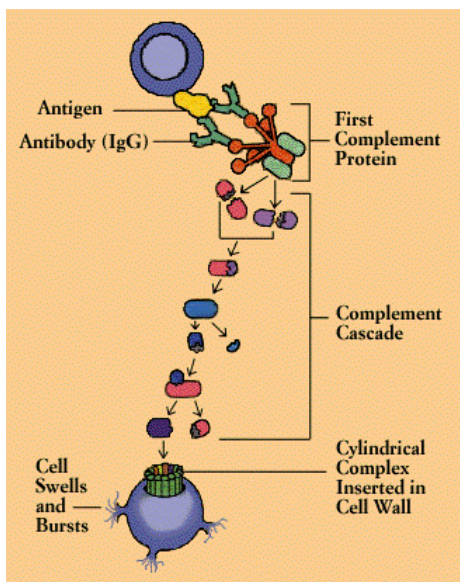
<http://www.chekinstitute.com/articles.cfm?select=66>

IV. Immune Response



[http://www.actagainstallergy.com/aaa/\\_images/system\\_01.gif](http://www.actagainstallergy.com/aaa/_images/system_01.gif)

A. Component System



<http://www.immunecentral.com/immune-system/iss11.cfm>

B. Adaptive Immune Response

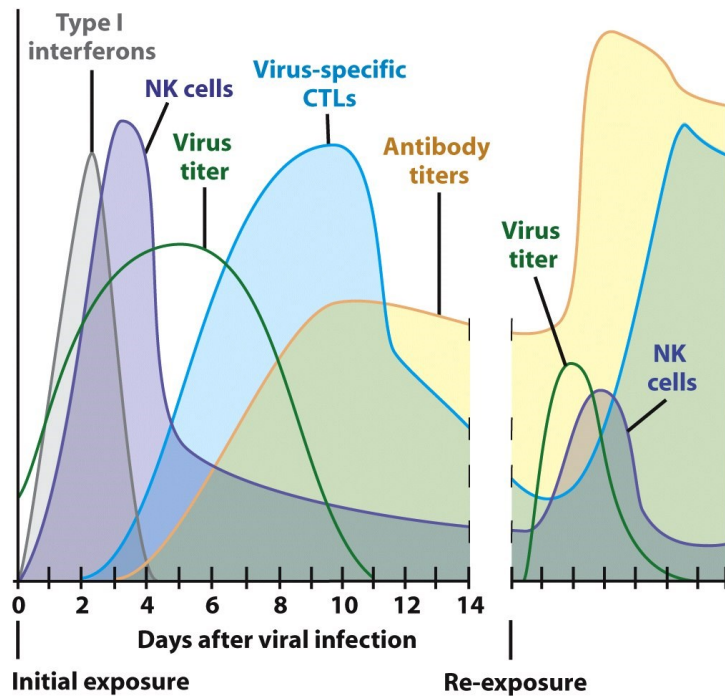
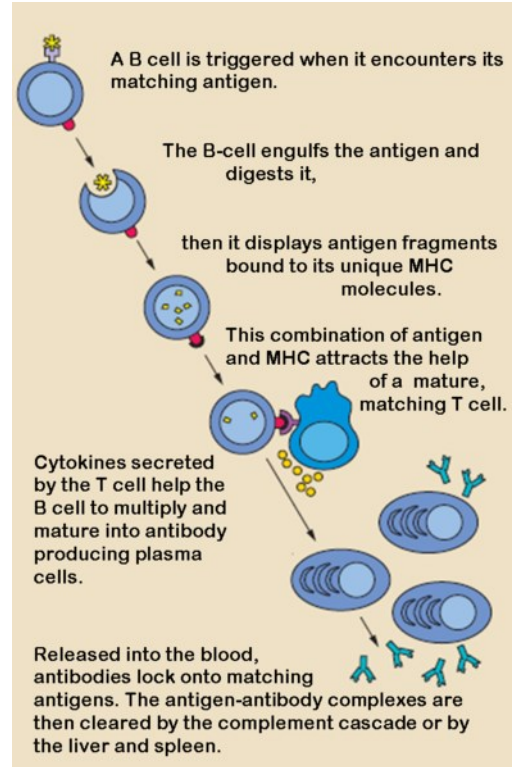


Figure 24-37  
 Molecular Cell Biology, Sixth Edition  
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