

Chapter Three

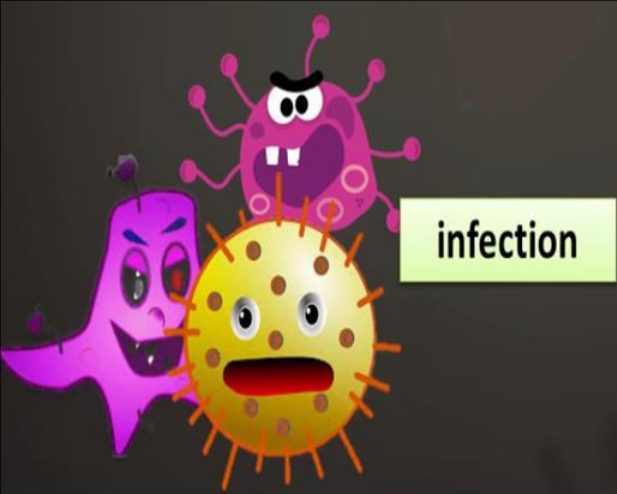
The complement system

The Complement System

- Set or group of **plasma proteins**
- Made constitutively by **liver**
- Present in **blood, lymph and extracellular fluids**

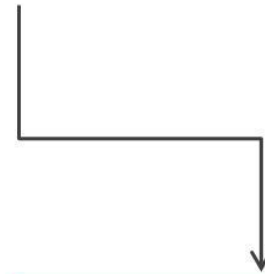


Circulate in inactive forms,
they are proteolytic enzymes



Complement proteins become active through cascade of events

i.e. Inactive complements become active



Functions of complement system



Complement activation pathways

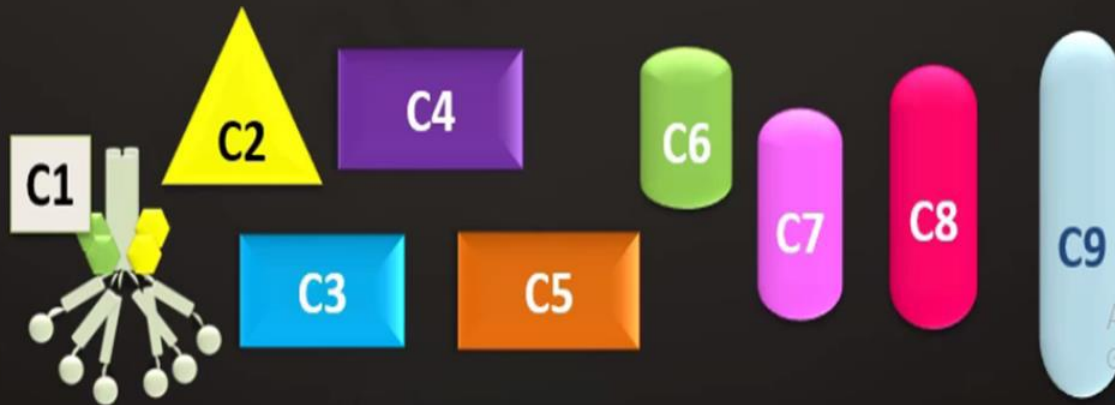
1. Alternative pathways
2. Classical pathways
3. Lectin pathways



Nomenclature of complement proteins

Nomenclature

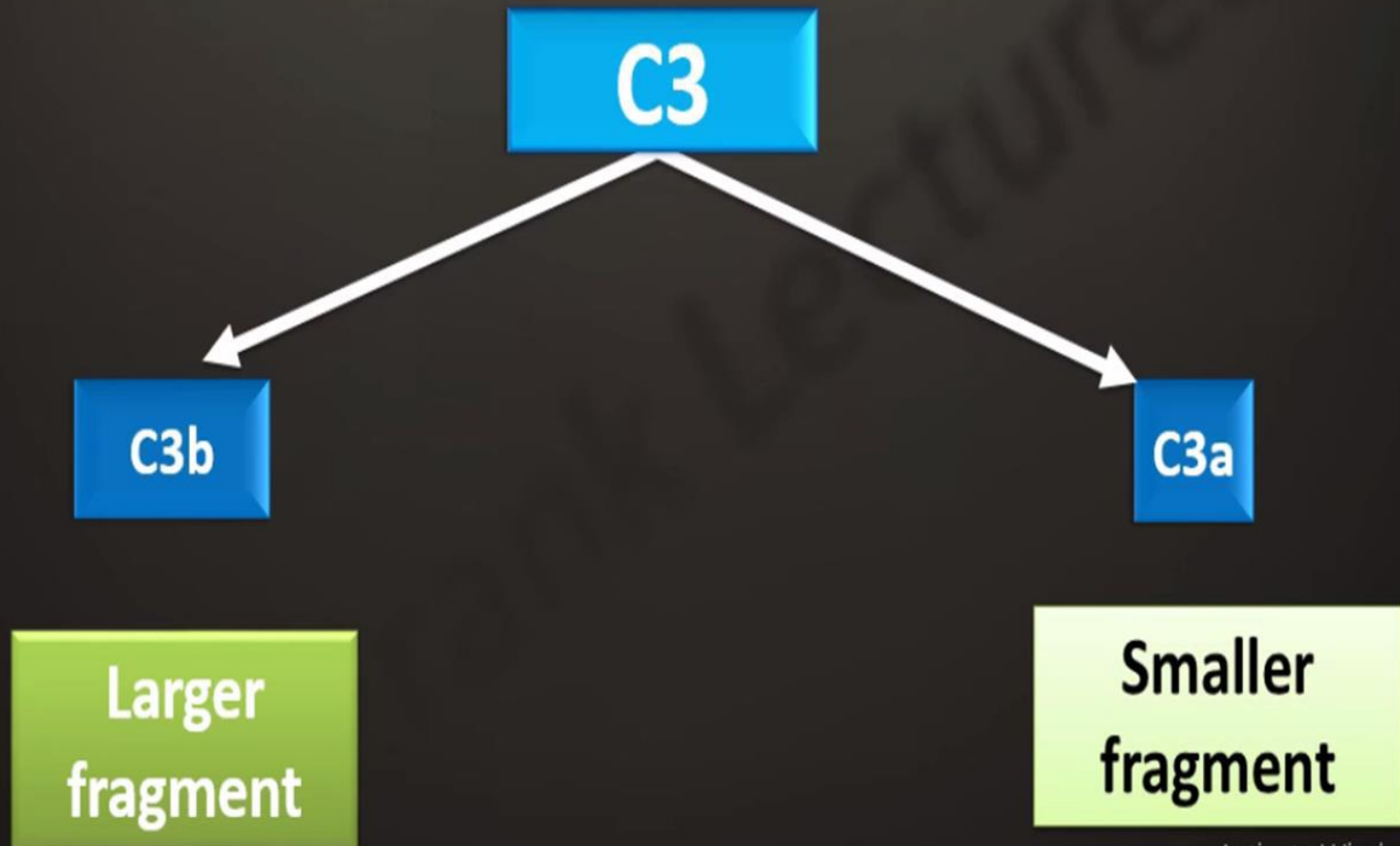
- The enzymes of the classical pathway were identified first
- Designated by the letter "C" followed by a number
- C1, C2, C3, C4, C5, C6, C7, C8, C9



Nomenclature

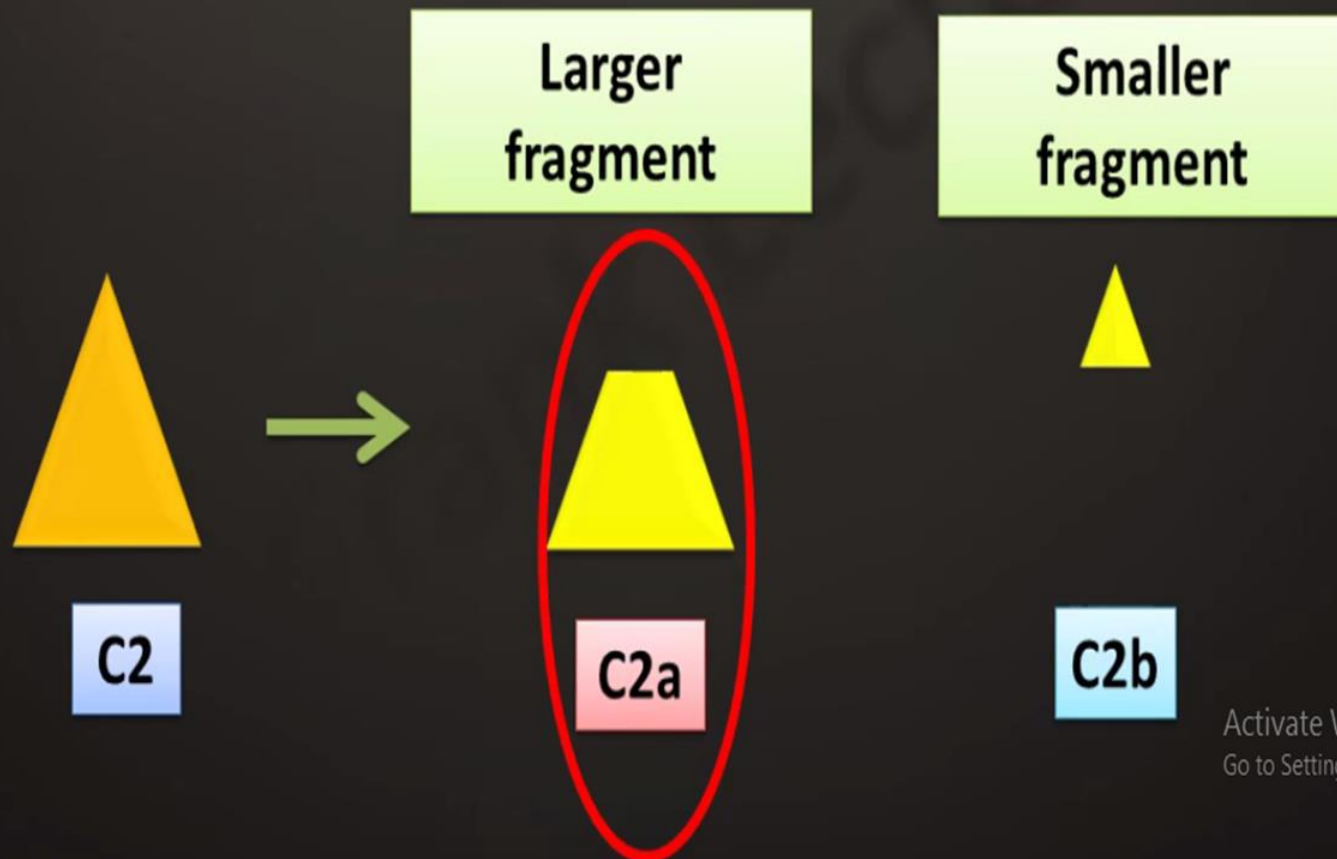
- When a protein is broken down into two, the resulting peptide fragments are designated by adding a lowercase suffix i.e. "-a" or "-b"
- Suffix "-a" represents smaller fragment
- Suffix "-b" represents larger fragment

Nomenclature



Nomenclature

- C2 is an exception



Nomenclature

- Proteins of Classical Pathway



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Nomenclature

- C1 is a complex
- It is composed of a large subunit C1q and two proteases C1r and C1s

