DONE BY: MUNTAWA AL-KHAZALLEE
LECTURE: ANTIGENS
antigen

- Microbe or foreign material → adaptive response.

- B-receptor for antigen:
  1. On B-cell or secreted B-cell (Ab or Ag) → bind to Ag directly without need MHC
  2. On T-cell → bind Ag + MHC bound to Ag (cell associated: virus, infected cell)
  3. MHC = HLA (cluster of gene)

  Presentation of Ag peptide to T-cell

  T-cell

  → Ag

  → Epitope

  → T-cells

  → MHC

  → Ag

* Epitope: Recognized part of antigen.

  - Ag → epitope

  - 2-type epitope:

    1. Linear
    2. Discontinuous
- 2-type epitope:
  - linear
  - a.a sequences (adjacent)
  - T-cell recognize only for it
  - B-cell (Ab) for both.

- antigen → ineffective binding
- immunogen → effective antigen
  - large + more complex
- protein → more immunogen than carbohydrate & lipid
- enzymatic cleaved protein
- T-cell recognize only for
  1. B-cell (Ab) for both.

- Ag → ineffective binding
  receptor

- Immunogen → effective antigen
  large + more complex
  → Ab production

- Protein → more immunogen than carbohydrate & lipid.

- Enzymatic cleaved → non-cleaved.

*Hapten*: Simple molecule, non-immunogenic, non-biological.