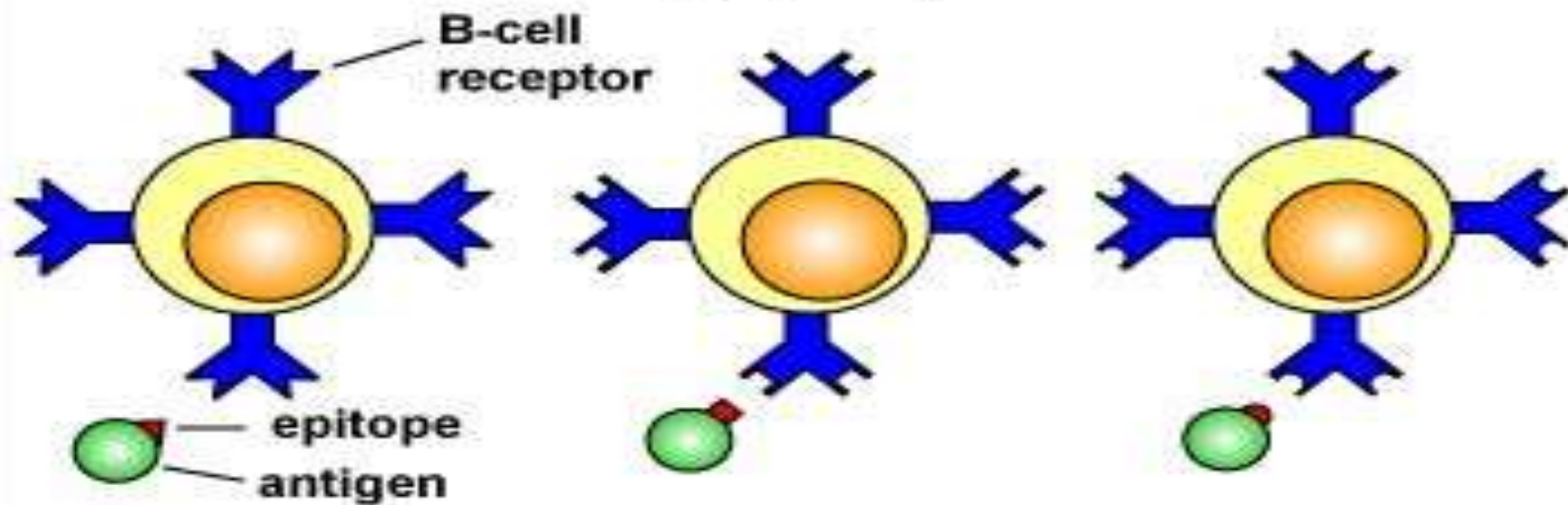


“B & T – CELL EPITOPES”

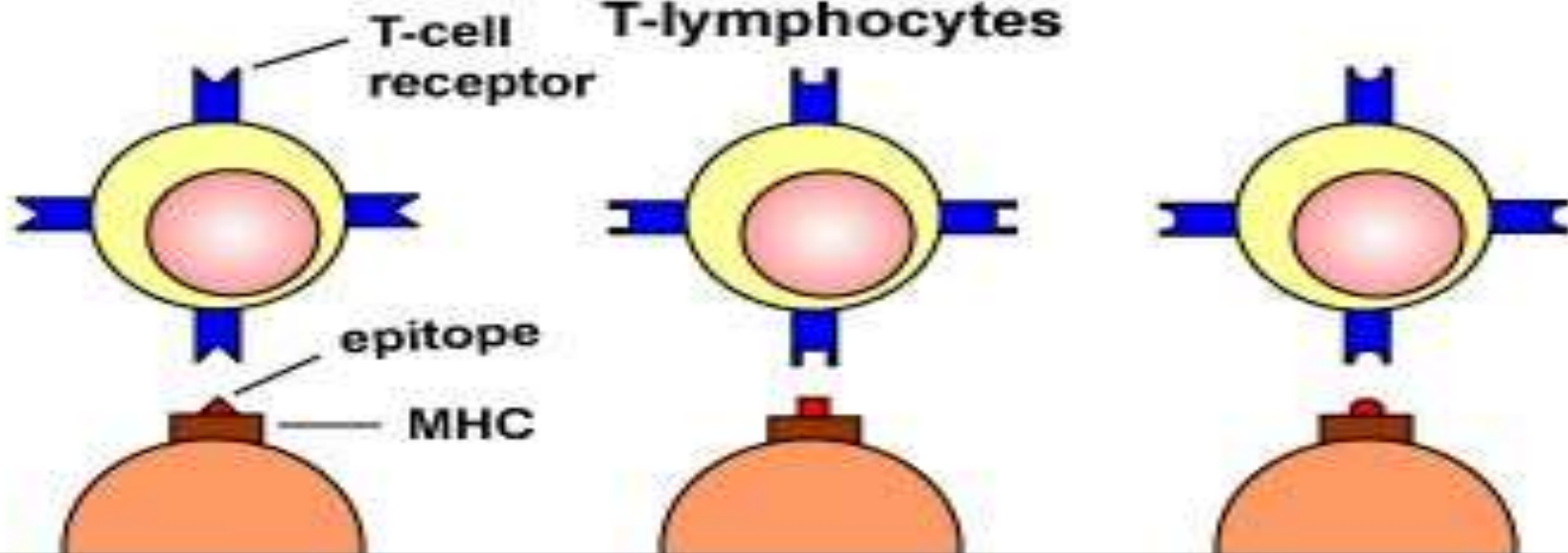
PRITHA MONDAL

ASSISTANT PROFESSOR ZOOLOGY

B-lymphocytes



T-lymphocytes

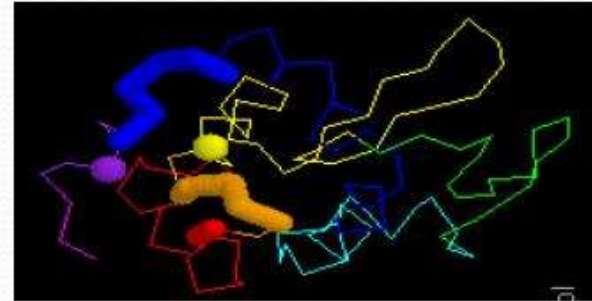


Comparison of epitope of T and B cell

	T cell epitope	B cell epitope
Receptor	TCR	BCR
MHC molecule	required to display processed antigen	none required
character	linear peptides	natural polypeptide, LPS, polysaccharide, organic compound
size	8 ~12 amino acids (CD8⁺), 12 ~17 amino acids (CD4⁺)	5~15 amino acids, 5~7 monosaccharide or 5~7 nucleotide
Epitope type	linear	conformational, linear
side	any	on the surface

Types of epitopes

B cell Epitope

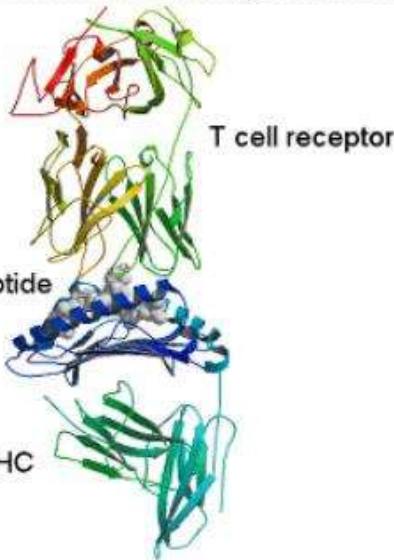


Conformational

Non-Conformational

Linear B cell Epitope

T cell Epitope



CTL epitope

Class I MHCs

Endogenous Antigen Processing

Helper T cell epitope

Class II MHCs

Exogenous Antigen Processing

Two different epitopes

- **B cell epitope**, a portion of antigen molecule that is recognized by B cell receptors.
- **T cell epitope**, the region of antigen molecules that are recognized by T cell receptors.