# rDNA

## Phage Based Vectors & Its Derivatives :-

### Phage vector :-

⇒ Linear DNA molecules derived from bacteriaphage lambda.

⇒ Phage vectors consists of an essentially complete phage genome, often M13 phage, into which is inserted DNA encoding the protein or peptide of interest.

⇒ The reminder of the phage genome is left unchanged and provides the other gene products needed for page life cycle.

### Lambda phage vector :-

⇒ Lambda phage vector consists of a virus particle including a head, tail and tail fibers. The head contains phage's double-stranded circular DNA genome.

→ Many phage vectors have been constructed in the recent past each with its own special features. There is the univarsal lambda vector.

→ The vector depend on.

i) The size of a DNA fragment

ii) Restriction enzyme

iii) The Neccessity for expression of the cloned fragment

iv) The Method of screening.

→ Lambda vectors can be classified into two types.

There are,

i) replacement vectors

ii) insertion vectors.

Derivatives :-

★ Lambda derivatives are described that can be used for cloning DNA.

* DNA Fragment of about 20 kilobase pairs generated by restriction enzymes [EcoR I, HindIII, Bam H I, MboI and BglII] Reco.

* Recombinants can be selected by their spi phenotype can be selected by their propagation is facilitated by the presence of a chi site.