

NUCLEOLUS :

Nucleolus (discovered by Fontana) is a non-membrane bound dynamic body which disappears in the late prophase and re-appears at nucleolar organising region NOR of chromosome in the telophase stage of cell division. Each nucleolus is produced by a nucleolar organising region (NOR) presence on a nucleolar organising chromosome. All eukaryotic cell contains at least one such chromosome. Nucleolus is a site of transcription of ribosomal RNA and assembly of ribosome. So, nucleolus has a high concentration of rRNA and proteins.

Nucleolus consist of three major regions -

1. **Fibrillar Centers** :- Containing rRNA genes in the form of partly condensed chromatin.
2. **Fibrillar component** :- Surrounds the fibrillar centers, which contains RNA molecules in the process of transcription.
3. **Granular regions** :- Outermost regions having mature ribosomal precursor particles.