

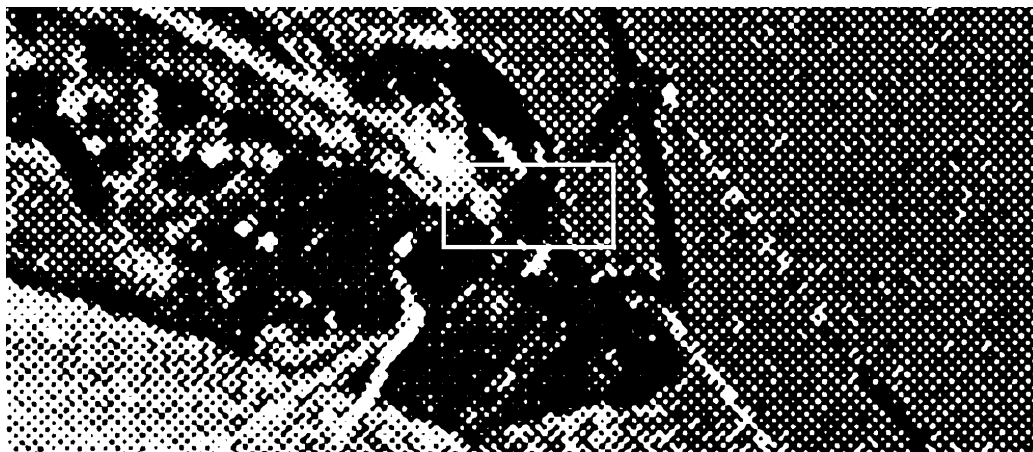
Magnification and Resolution

The image is composed of dots.

No amount of **magnification** will reveal any more detail or information ie; nothing more can be **resolved**.

Magnification increases the apparent size of an object.

Resolution is the ability of an optical system to distinguish between adjacent points.

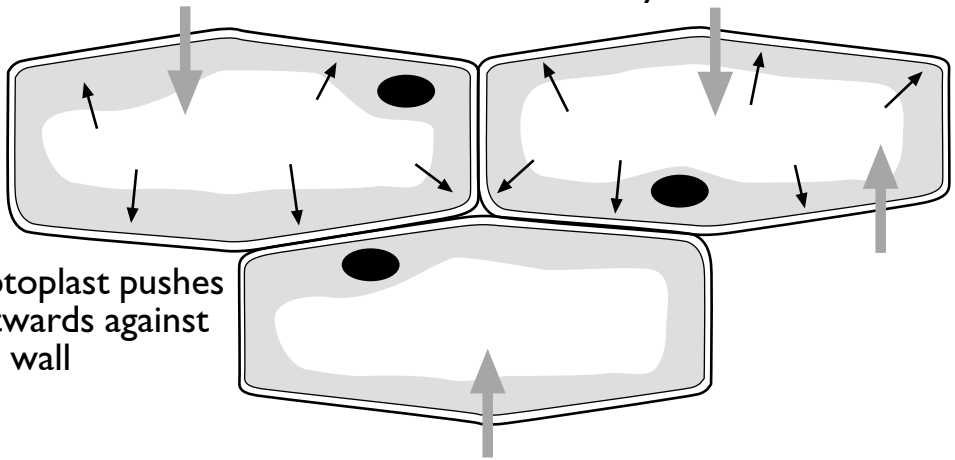


Diagrams of turgid and plasmolysed cells

Turgid Cells

Surrounding solution has lower water potential than protoplast

Water taken in by osmosis

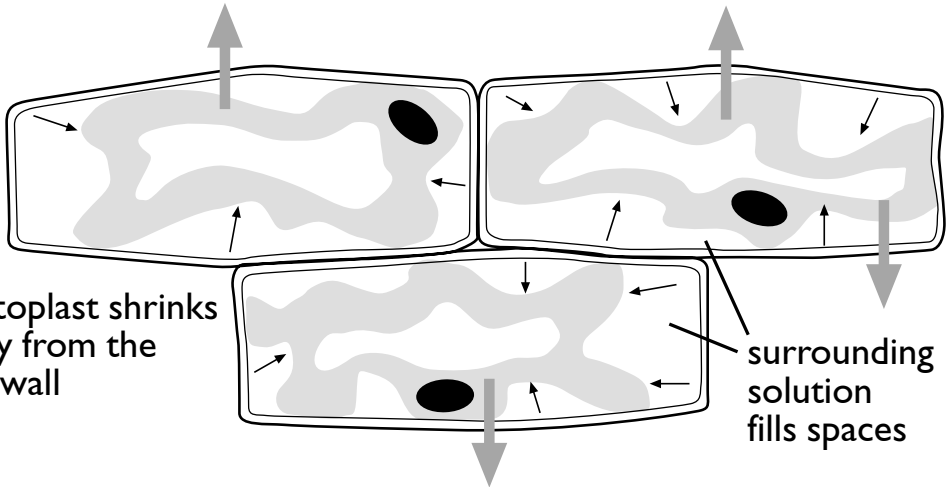


Protoplast pushes outwards against cell wall

Plasmolysed Cells

Surrounding solution has higher water potential than protoplast

Water lost by osmosis



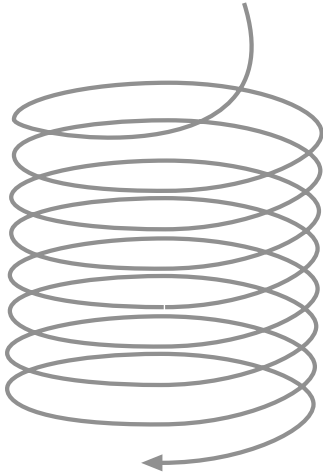
Protoplast shrinks away from the cell wall

surrounding solution fills spaces

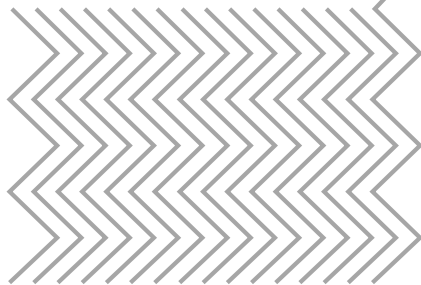
Secondary and tertiary structures of proteins

Secondary structure of proteins

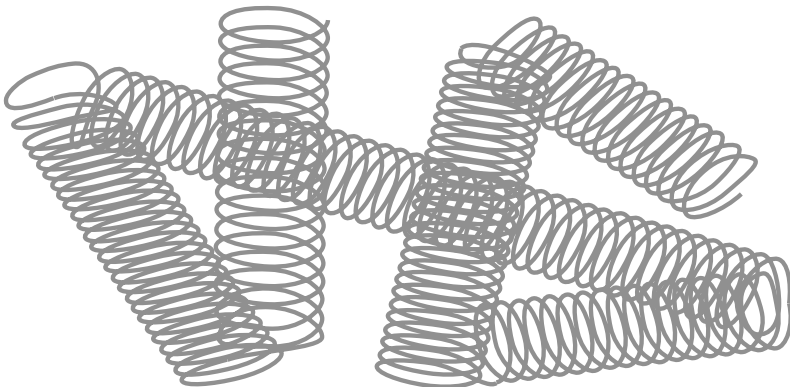
In an alpha helix hydrogen bonds 'pull' molecule chain into a spiral structure



In a beta sheet hydrogen bonds hold and align molecule chains side by side. Angle of bonds in each chain are as a consequence perfectly aligned forming 'pleats'.



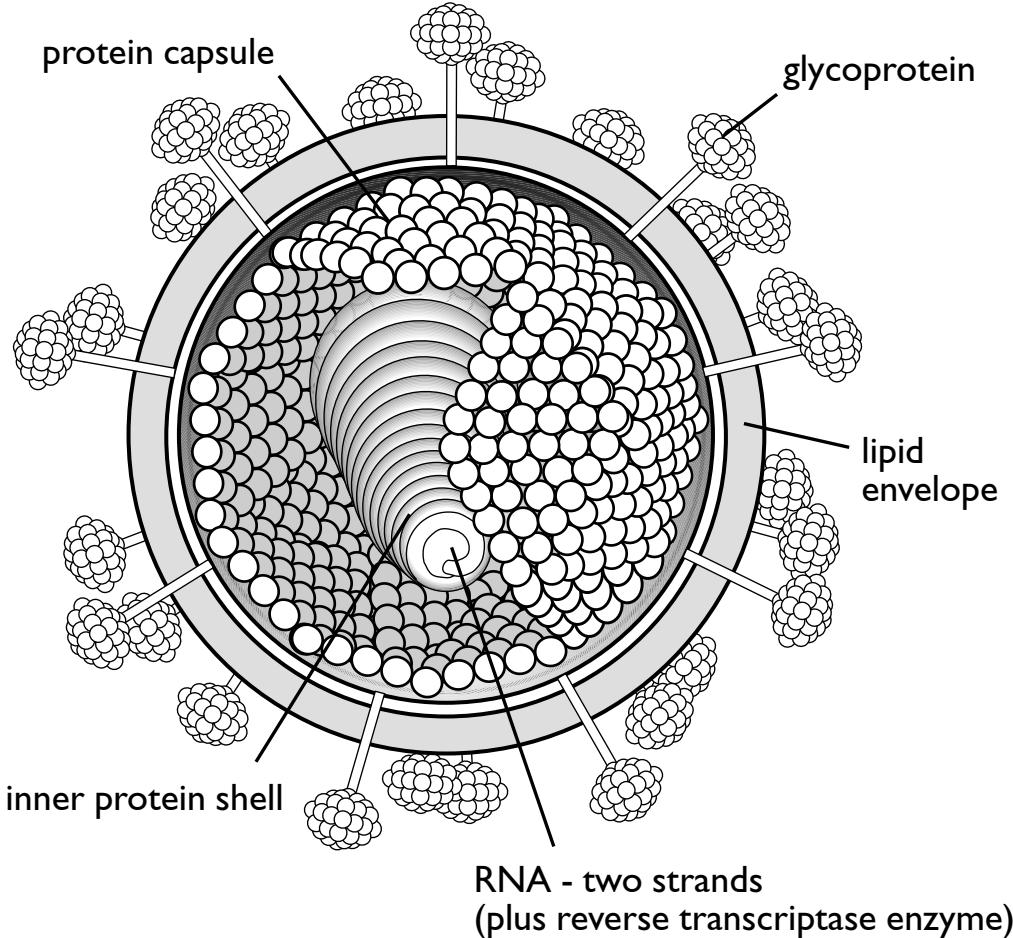
Tertiary structure of proteins



The alpha helix chain folds around itself forming a third level of structural organisation, just like a tangled telephone flex

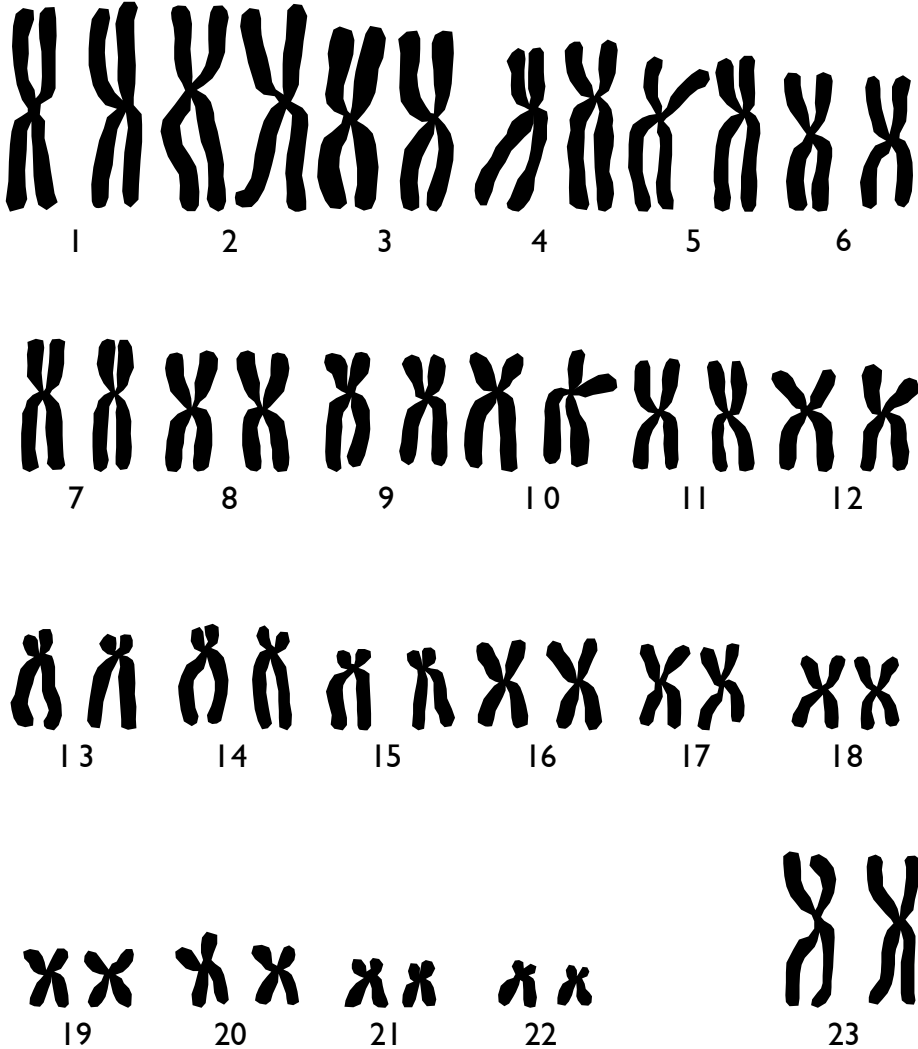
HIV virus

Human Immunodeficiency Virus

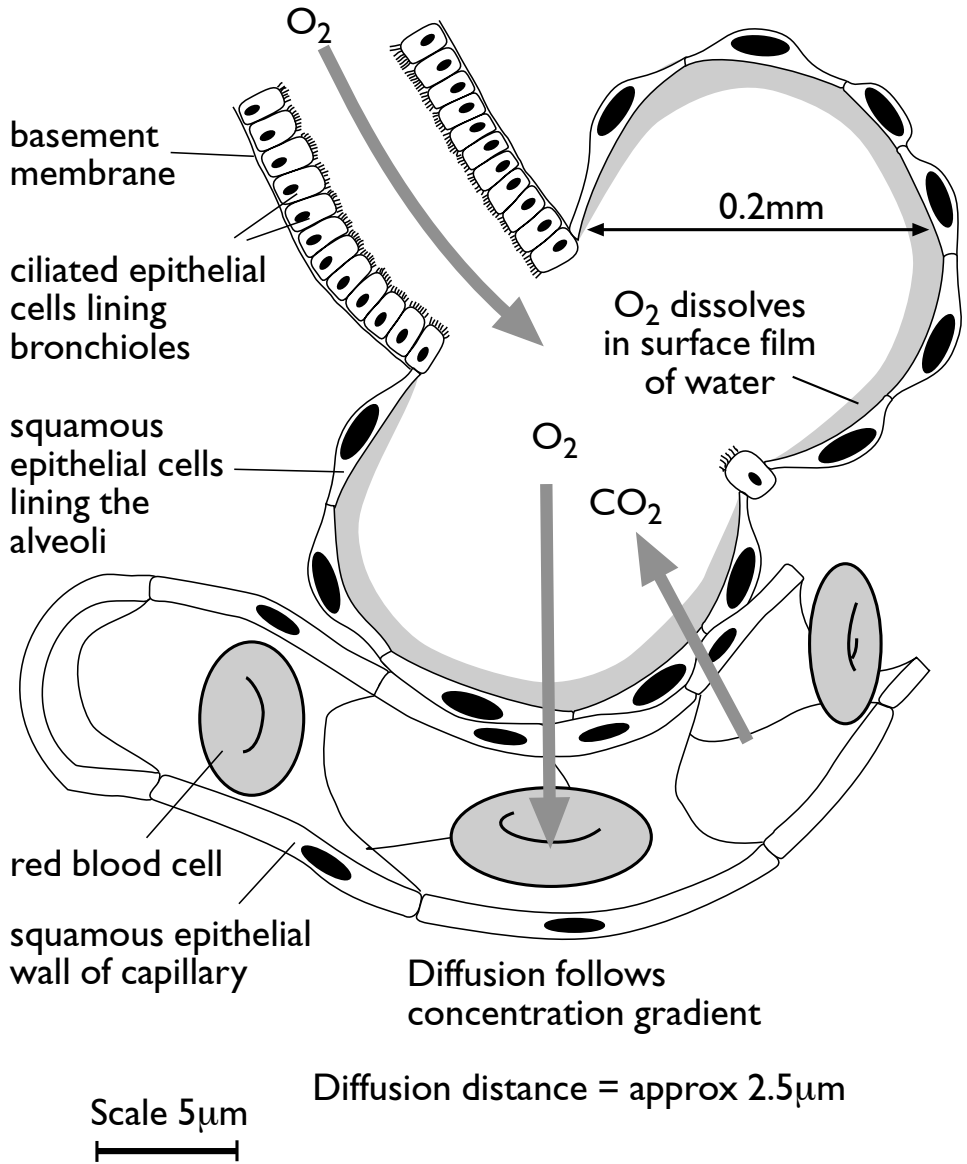


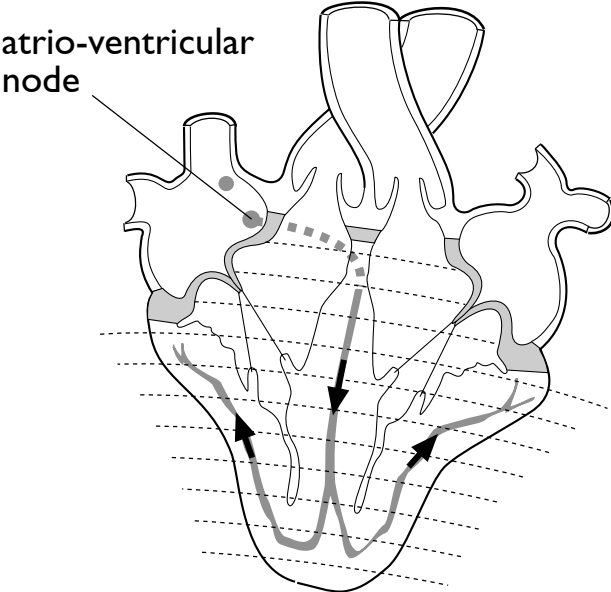
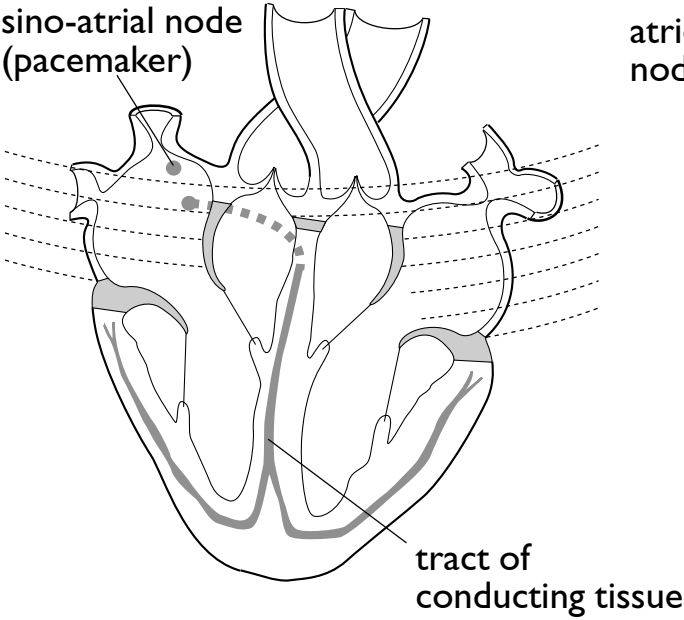
Human karyotype
analysed into homologous pairs

Normal Human Female



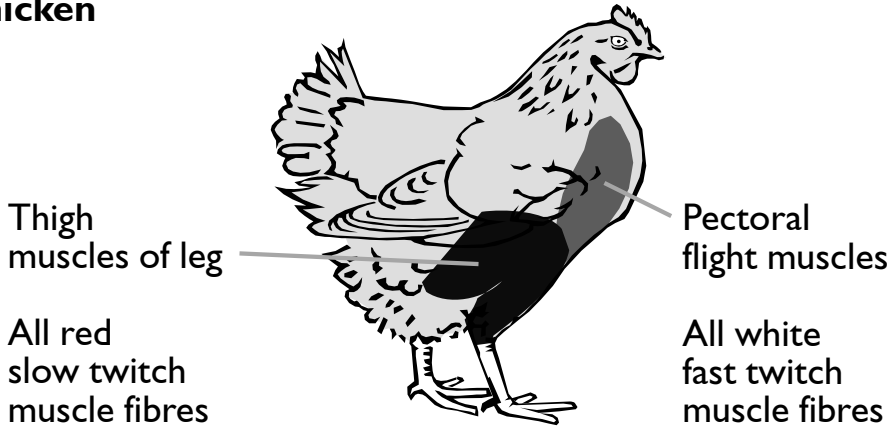
Diffusion at alveolus





Chicken muscles

Chicken



Dark red chicken leg



White chicken breast