Cell Theory	Schleiden and Schwann
“Omnis cellula-e-cellula”	Rudolf Virchow
Coined the term ‘cell’	Robert Hooke

First person to see live cells under microscope	Anton Van Leeuwenhoek
Smallest cell	Mycoplasma (0.3µm)
Mesosome	Infolding of plasma membrane in prokaryotes- vesicles, tubules or lamellae Help in DNA replication and cell wall formation

Cell envelope	In prokaryotic cells Made up of glycocalyx (slime or capsule), cell wall and plasma membrane
Plasmid	Extra chromosomal, circular DNA in prokaryotic cells
Pili and Fimbriae	Help bacteria in attachment

Prokaryotic ribosomes	70S (50S and 30S) Polysome- several ribosomes attached to mRNA for protein synthesis
Bacterial Cell wall	G +ve bacteria- Thick peptidoglycan and teichoic acid G -ve bacteria- Thin peptidoglycan and lipopolysaccharides
Peptidoglycan	Polymer of Cross linked monomers- N-acetylglucosamine (NAG) and N-acetylmuramic acid (NAM) attached to peptide

Fluid mosaic model	Singer and Nicolson
Endoplasmic reticulum	Rough ER- Protein synthesis Smooth ER- Lipid synthesis
Golgi Complex	Synthesis of glycoproteins and glycolipids

Tonoplast	A single membrane surrounding vacuoles
Plastids	Double membrane bound and contain extra chromosomal DNA, 70S ribosomes
Mitochondria	Double membrane bound and contain extra chromosomal circular DNA, 70S ribosomes. Site for aerobic respiration.

Leucoplasts	Amyloplast- store carbohydrate Elaioplast- store oil and fat Aleuroplast- store proteins
Observed ribosomes for the first time	George Palade
Eukaryotic ribosome	80S (60S and 40S)

Robert Brown	First described nucleus
Nucleolus	Site for ribosomal RNA synthesis
Chromatin is visible at	Interphase nucleus

Lysosomes	Contain hydrolytic enzymes
Glyoxysomes	Present in plants and some fungi Degradation of fats in seeds Glyoxalate cycle
Peroxisomes	Oxidation of long chain fatty acids Biosynthesis of plasmalogens Contains oxidative enzymes; uric acid oxidase, catalase, etc.