



Glossary

Term	Meaning
Actin filaments	A type of protein that forms part of the cytoskeleton and support the cell membrane. It helps with strength, shape and movement of the cell.
Adjacent cells	The cells close together.
Amino acids	The building blocks of proteins. They have two functional groups: Amino acid (NH_2), carboxyl acid (COOH). The centre has a specific side chain and hydrogen atom. All four are surrounded by a carbon.
Angiogenesis	The process of how new blood vessels form from pre-existing blood vessels.
Apoptosis	Programmed cell death.
Adenosine Triphosphate (ATP)	A nucleotide that functions as an energy source for all cells.
Autocrine	It is where a signal molecule is released into the extracellular fluid and acts on the cell that secreted it.
Axon	A long extension that sends signal from dendrites to axon terminal of a neuron. Axon hillock is the area closer to the cell body
Bone marrow	It is centrally found in the bone and is where red and white blood cells are made.
Brain	The organ protected by the skull. Together with the spinal cord it processes sensory information and coordinates response
Cascade	A series or sequence where something is passed onto another.
Cell body	Also known as soma, it contains nucleus and other organelles in a large space.
Cell membrane	It surrounds an animal cell and controls what enters and leaves the cell.
Cell wall	A rigid structure that supports and protects plant cells.



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Chloroplasts	It contains the green pigment chlorophyll that helps absorb light so plants make their food (glucose).
Cholesterol	It is a type of steroid that is found in steroid hormones and cell membrane.
Collagen	A protein produced in the extracellular matrix and is strong and filled with fibre.
Connexon	A channel that forms gap junctions between adjacent cells. It consists of six connexin proteins.
Cytokines	Proteins that conduct specific and non-specific immune defences.
Cytoskeleton	It is a structure that has two types of protein filaments: actin, intermediate and microtubules. Together, they help give the cell shape, protect the cell and help with motility.
Density	The substance's mass per unit of volume
Differentiation	Changes to cell shape and function where unspecialised cells divide to become specialised for specific functions.
Diffusion	The movement of particles from an area of high concentration to an area of low concentration down a concentration gradient.
DNA (deoxyribonucleic acid)	It is one of the two nucleic acids and consists of two polynucleotides coiled together to form a double helix.
Domain	A defined structure or region of a protein.
Dysregulation	Not coordinated or working properly.
Effector	Cell that changes activity in response to CNS (processing centre)
Eicosanoids	Modified fatty acids
Elastin	A protein found in the extracellular matrix in large arteries and airways
Endocrine cell	Hormone-secreting cell in the layer called epithelium.
Enzyme	A type of protein responsible for speeding a chemical reaction.



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Extracellular matrix	A network of material that forms a complex outside of cell for strength, support and organisation.
Fibronectin	A glycoprotein of the extracellular matrix that binds to integrins.
Gap junctions	A passageway between cells that helps with exchange and transport.
Genomic	The complete gene composition of a cell.
Gland	A structure that secretes substances e.g., endocrine gland secretes hormones.
Glucose	A sugar molecule.
Glycogen	A large molecule consisting of glucose monomers. It is found in muscle and liver cells.
Glycoprotein	A protein that has a sugar molecule attached to it.
Immune	To protect the body from infection.
Impulses	Messages.
Insulin	A protein hormone that regulates glucose levels in the blood.
Integrin	A transmembrane protein that binds to proteins in the extracellular matrix and organise adjacent cells.
Integrity	Undivided and strong status.
Invasion	Species that spread with current spaces on their own.
Ion	An atom that gains or loses electrons. Electrons are negatively charged particles.
Ligand	Signalling molecule that binds to a receptor.
Metastasis.	The process can migrate parts of the body.
Microtubules	A hollow protein filament made of tubulin protein and is part of cytoskeleton
Mitosis	The type of cell division that involves a parental cell divide to form two daughter cells. It is needed for growth and repair.
Monocyte	A type of white blood cells that circulates the blood and differentiates into macrophages



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Monomer	A monomer is a type of molecule or unit where many joined together form polymers.
Muscle	A type of tissue consisting of muscle cells that help with movement and support.
Myelin sheath	Fatty layer that provides insulation along the axon.
Nerves	Also known as neuron and transmits signals as electrical impulses
Neurotransmitters	Signalling molecules that are produced and stored in neurons
Nodes of Ranvier	A space between Schwann cells.
Nucleus	Organelle that contains genetic information to control cell.
Oestrogen	A type of steroid hormone that functions in the female reproductive system.
Organelle	A structure or little organ with a defined structure and function.
Paracrine	Signalling molecule released and acts on nearby cells.
Peptide	A chemical bond joining amino group of one amino acids and carboxylic acid group of another
Peripheral nerves	Nerves extended from central nervous system.
Phagocyte	An immune cell that engulfs foreign materials.
Plasmodesmata	Water-filled connections between adjacent plant cells.
Post-synaptic neuron	Neuron conducts information away from synapse,
Pre-synaptic neuron	The neuron that conducts action potential towards synapse
Proliferation	A rapid increase in number.
Prostaglandins	Unsaturated fatty acids (eicosanoids) that act as paracrine or endocrine manner. It has many effects on the female reproductive system during pregnancy.
Protein	A large molecule containing amino acids and functions for growth and repair.



Glossary

Receptor	A receptor that recognises the signal
Regulatory gene	A gene that regulates the expression of other genes.
Replication	The copying of DNA strands occurring a few times.
Response element	Sequences of DNA that are recognised by transcription factors and regulate gene expression
Ribosome	The organelle in a cell that produces proteins.
Schwann	A type of glial cells that surround neurones. It forms myelin sheath on axons for insulation
Signal transduction	The process that happens within the cell for that signal to reach its target and start a response.
Signal	An agent or molecule that affects the properties of the cell.
Soluble	To be dissolved in.
Spinal cord	A structure protected by the spine. It connects the brain with other parts of the body to coordinate a response.
Steroid	A lipid/fat molecule with a chemical structure containing four carbon rings containing. Its main role is a hormone.
Stimuli	Detectable change internally or externally.
Synapse	A junction or cleft between axon terminal of one neuron to another.
Synthesis	Production or creating something
Transcription	The process of using DNA as a template to make an RNA molecule.
Transcription factor	The protein that helps transcribing genes by affecting RNA polymerase
Transmembrane protein	A protein embedded in the phospholipid bilayer in the cell membrane and acts as receptor or ion channel
Transmit	Conduct, communicate
Vacuole	An organelle found in plant cells where water, sugar, ions and amino acids are stored.



Glossary

Vesicles	A small membraned sac in the cell.
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