

Unit 3 Terminology

Word Roots

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| centro- = the center; -soma = a body (<i>centrosome</i> : material present in the cytoplasm of all eukaryotic cells and important during cell division) |
| chloro- = green (<i>chloroplast</i> : the site of photosynthesis in plants and eukaryotic algae) |
| cili- = hair (<i>cilium</i> : a short hair-like cellular appendage with a microtubule core) |
| cyto- = cell (<i>cytosol</i> : a semifluid medium in a cell in which are located organelles) |
| -ell = small (<i>organelle</i> : a small formed body with a specialized function found in the cytoplasm of eukaryotic cells) |
| endo- = inner (<i>endomembrane system</i> : the system of membranes within a cell that include the nuclear envelope, endoplasmic reticulum, Golgi apparatus, lysosomes, vacuoles, and the plasma membrane) |
| eu- = true (<i>eukaryotic cell</i> : a cell that has a true nucleus) |
| extra- = outside (<i>extracellular matrix</i> : the substance in which animal tissue cells are embedded) |
| flagell- = whip (<i>flagellum</i> : a long whip-like cellular appendage that moves cells) |
| glyco- = sweet (<i>glycoprotein</i> : a protein covalently bonded to a carbohydrate) |
| lamin- = sheet / layer (<i>nuclear lamina</i> : a netlike array of protein filaments that maintains the shape of the nucleus) |
| lyso- = loosen (<i>lysosome</i> : a membrane-bounded sac of hydrolytic enzymes that a cell uses to digest macromolecules) |
| micro- = small; -tubul = a little pipe (<i>microtubule</i> : a hollow rod of tubulin protein in the cytoplasm of almost all eukaryotic cells) |
| nucle- = nucleus; -oid = like (<i>nucleoid</i> : the region where the genetic material is concentrated in prokaryotic cells) |
| phago- = to eat; -kytos = vessel (<i>phagocytosis</i> : a form of cell eating in which a cell engulfs a smaller organism or food particle) |
| plasm- = molded; -desma = a band or bond (<i>plasmodesmata</i> : an open channel in a plant cell wall) |
| pro- = before; karyo- = nucleus (<i>prokaryotic cell</i> : a cell that has no nucleus) |
| pseudo- = false; -pod = foot (<i>pseudopodium</i> : a cellular extension of amoeboid cells used in moving and feeding) |
| thylaco- = sac or pouch (<i>thylakoid</i> : a series of flattened sacs within chloroplasts) |
| tono- = stretched; -plast = molded (<i>tonoplast</i> : the memb. that encloses a large central vacuole in a mature plant cell) |
| trans- = across; -port = a harbor (<i>transport vesicle</i> : a membranous compartment used to enclose and transport materials from one part of a cell to another) |
| ultra- = beyond (<i>ultracentrifuge</i> : a machine that spins test tubes at the fastest speeds to separate liquids and particles of different densities) |
| vacu- = empty (<i>vacuole</i> : sac that buds from the ER, Golgi, or plasma membrane) |
| amphi- = dual (<i>amphipathic molecule</i> : a molecule that has both a hydrophobic and a hydrophilic region) |
| aqua- = water; -pori = a small opening (<i>aquaporin</i> : a transport protein in the plasma membrane of a plant or animal cell that specifically facilitates the diffusion of water across the membrane) |
| co- = together; trans- = across (<i>cotransport</i> : the coupling of the "downhill" diffusion of one substance to the "uphill" transport of another against its own concentration gradient) |
| electro- = electricity; -genic = producing (<i>electrogenic pump</i> : an ion transport protein generating voltage across a membrane) |
| endo- = inner; cyto- = cell (<i>endocytosis</i> : the movement of materials into a cell. Cell-eating) |
| exo- = outer (<i>exocytosis</i> : the movement of materials out of a cell) |
| hyper- = exceeding; -tonus = tension (<i>hypertonic</i> : a solution with a higher concentration of solutes) |
| hypo- = lower (<i>hypotonic</i> : a solution with a lower concentration of solutes) |
| iso- = same; (<i>isotonic</i> : solutions with equal concentrations of solutes) |
| phago- = eat (<i>phagocytosis</i> : cell eating) |
| pino- = drink (<i>pinocytosis</i> : cell drinking) |
| plasm- = molded; -lyso = loosen (<i>plasmolysis</i> : a phenomenon in walled cells in which the cytoplasm shrivels and the plasma membrane pulls away from the cell wall when the cell loses water to a hypertonic environment) |

Vocabulary (you should be able to use all of these terms in context)

Chapter 7

actin
basal body
cell fractionation
cell wall
central vacuole
centriole
centrosome
chloroplast
chromatin
chromosome
cilium
collagen
contractile vacuole
crista
cytoplasm
cytoplasmic streaming
cytoskeleton
cytosol
desmosome
dynein
electron microscope (EM)
endomembrane system
endoplasmic reticulum (ER)
extracellular matrix (ECM)
fibronectin
flagellum
food vacuole
gap junction
glycoprotein
golgi apparatus
granum
integrin
intermediate filament
light microscope (LM)
lysosome
microfilament
microtubule
middle lamella
mitochondrial matrix
mitochondrion
myosin
nuclear lamina
nucleoid
nucleolus
nucleus
organelle
peroxisome
phagocytosis
plasma membrane
plasmodesma
plastid
primary cell wall
prokaryotic cell
proteoglycan
pseudopodium
resolving power
ribosome
rough ER
scanning electron microscope (SEM)
secondary cell wall
smooth ER
stroma
thylakoid
tight junction
tonoplast
transmission electron microscope (TEM)
transport vesicle
ultracentrifuge
vesicle

Chapter 8

active transport
amphipathic molecule
aquaporin
concentration gradient
cotransport
diffusion
electrochemical gradient
electrogenic pump
endocytosis
exocytosis
facilitated diffusion
flaccid
fluid mosaic model
gated channel
hypertonic solution
hypotonic solution
integral protein
isotonic solutions
ligand
membrane potential
osmoregulation
osmosis
passive transport
peripheral protein
phagocytosis
pinocytosis
plasmolysis
proton pump
receptor-mediated endocytosis
selective permeability
sodium-potassium pump
transport protein
turgid