Cheatography

Exam 2 - Cell Biology Cheat Sheet by E_Hilliker via cheatography.com/182438/cs/37955/

MACROMC	LECULES		Lipids			Nucleotides			Exocytosis
Common Fu	unctional G	iroups	Trigly- cerides	Phosph- olipids	Steroids		H. N	н., ,	A. Exocytosis: vesicle joins plasma membrane, releases contents Secretory Vesicle Poterins Poterins
Hydroxyl Carboxyl	-ОН - СООН	polar polar	-made of glycerol and fatty acids	-forms a bilayer (membr- anes)	-4 rings	phosphate H H S			Inside weide Versice and the sense of the s
Carbonyl Amino Phosphate	-CO -NH3 -PO3	polar polar polar	-three "- strands"	-polar, hydrop- hilic	-chole- sterol	*amount of can change	Pi (phosphate	e group)	Enzymes
Methyl Sulfhydryl	-CH3 -SH	non- polar non-	-no kink =	heads nonpolar, estrogen	TRANSPORT/ENZYMES			-bind to a substrate. These fit depending on the SHAPE of enzymes	
Organic Co	_	polar	saturated	hydrop- hobic tails	g	Osmosis Hypertonic high	Hypotonic	Isotonic equili-	-competitive inhibitors can block substrates by changing the shape of the enzyme
Carbohydrates Lipid	ORGANIC COM	POUNDS Nucleic Acids Include	-kink = unsatu-		-testo- sterone	solute, less water	solute, high water	brium	Enzymes are catalysts
	erdes		Amino H ₂ N	d form of ar	Carboxyl	cell shriveled	cell swells (hippo) Passive	cell is normal	$\begin{array}{c c c c c c c c c c c c c c c c c c c $
*more details underneath this block			group True Group group Side chain Non- *R groups can be a mix of the following: uncharged, non-polar,					D Things that factor enzyme activity:	
Monosa I cch- I arides	rides arides PEPTIDE BOND			l by a	Image: state of the state o			-temperature	
glucose	-sucrose -lactose	"starch" - cellulose	^this results in a dehydration (taking H20 out) *protein = shape		Endocytosis		ane	*enzymes have an optimal temp. and pH ^this depends on the specific enzyme!	
	-dextrose -maltose	-chiton - amylose -					Cytopiaem		*enzymes usually can go back to its original form, unless it DENATURES
*sugars can	galactose i dissolve ii	glycogen n H20							

because they are NON-POLAR!

By E_Hilliker

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CELL STRUCTURES/ORGA-NELLES

Prokaryotic	vs Eukaryotic
-no nucleus	-nucleus
-mainly bacteria	-animals, plants, fungi, protists
-small! simple!	-large! more complex!
-no organelles	-orangelles
0	nembrane-bound rith a function

Cell wall / Cell me	embrane
-only in plants	-plants and animals
-provide strong support	-phospholipid bilayer
-doesn't move du	iring osmosis

Nucleus

-stores DNA (chromatin)

Mitochondria

-ATP and cellular respiration

-has a double membrane and its own DNA/ribosomes

Vesicles

-transport materials

-can be led by MOTOR

PROTEINS

	Lysosomes	ysosomes						
	-break down ma	*an elec						
	Cytoskeleton	nu skeleton an						
	-dense network	nucleus						
	-support and sh	*when a to the nu						
	-anchors organ	anchors organelles						
		^must b						
	Golgi Apparatus	8						
	-protein modific	ation and sorting	Glycolys					
	Endoplasmic R	eticulum						
_	Rough ER	Smooth ER	СҮТО					
	-ribosome	-lipid	No C Ferm					
	synthesis	synthesis	rem					
		-detoxifi-						
		cation	Etha o lact					
	Ribosomes							
	-read RNA							
	-synthesize pro	teins	Copyright © 2008 Pearson Education, Inc., p					
_								
	Chloroplasts							
	-photosynthesis							
	-thylakoid stack							
	-own DNA and	ribosomes						
	Central vacuole	;						
	-H20 regulation							
	-only plants							
	METABOLISM							
	METABOLIOW							
_	Redox Reaction	าร						
	LEO	GER						
	lose electrons	gain electrons						
	oxidizing	reduction						
	Ρι	Iblished 6th Novem	ber, 2023.					

Electron movemen

*an electron closer to the
nucleus has LESS energy than
an electron further from the
nucleus
*when an electron moves closer
to the nucleus, it gives off small
amts of energy
^must be slow steps

Glycolysis -> pyruvate



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