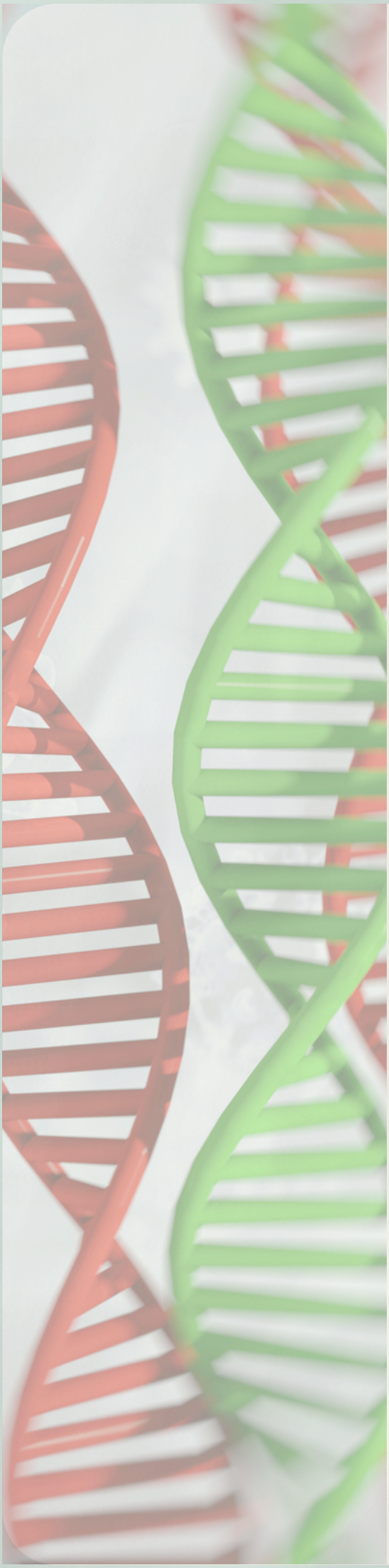

QUIZ TIME

Bio-chemistry

Lec22

Done by:

Lemar mustafa

لجنة طب الأسنان

What is the primary site of lipolysis in the body?

A. Liver
B. Muscle
C. Adipose tissue
D. Kidney

Answer: C. Adipose tissue

Which enzyme initiates the breakdown of triglycerides during lipolysis?

A. Lipoprotein lipase
B. Hormone-sensitive lipase
C. Pancreatic lipase
D. Monoacylglycerol lipase

Answer: B. Hormone-sensitive lipase

What are the main products of lipolysis?

A. Cholesterol and ketone bodies
B. Fatty acids and glucose
C. Free fatty acids and glycerol
D. Acetyl-CoA and ATP

Answer: C. Free fatty acids and glycerol

Which hormone stimulates lipolysis during fasting or stress?

A. Insulin
B. Glucagon
C. Epinephrine
D. Thyroxine

Answer: C. Epinephrine

What is the fate of glycerol released during lipolysis?

A. Converted to ketone bodies
B. Used in protein synthesis
C. Transported to liver and kidney for gluconeogenesis
D. Stored in adipose tissue

Answer: C. Transported to liver and kidney for gluconeogenesis

Which molecule carries free fatty acids in the bloodstream?

A. Hemoglobin
B. Albumin
C. Globulin
D. Myoglobin

Answer: B. Albumin

Where does β-oxidation of fatty acids occur?

A. Cytoplasm
B. Nucleus
C. Mitochondria
D. Endoplasmic reticulum

Answer: C. Mitochondria

Which of the following is NOT involved in the carnitine shuttle?

A. Carnitine acyl transferase I
B. Carnitine translocase
C. Carnitine acyl transferase II
D. Acyl-CoA dehydrogenase

Answer: D. Acyl-CoA dehydrogenase

How many ATP molecules are produced from complete β-oxidation of palmitic acid (16C)?

A. 96 ATP
B. 129 ATP
C. 35 ATP
D. 64 ATP

Answer: B. 129 ATP

10 What is the correct sequence of reactions in one cycle of β-oxidation?

A. Hydration → Oxidation → Thiolysis → Activation
B. Oxidation → Hydration → Oxidation → Thiolysis
C. Activation → Transport → Oxidation → Cleavage
D. Oxidation → Cleavage → Hydration → Transport

Answer: B. Oxidation → Hydration → Oxidation → Thiolysis