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Department- medical lab science

Course- Bch 202

Matrix no- 18/MHS06/004

Is vitamin C a coenzyme? Justify your answer Describe the chemistry of phospholipids Differentiate between phospholipids and glycolipids To aid for reading

Yes, vitamins c is modified to coenzymes. Coenzymes function as a major component of enzymes, being essential for their function in the catalysis of biochemical reactions. Tightly bound coenzymes are often referred to as prosthetic groups.

Phospholipids are major components of the plasma membrane, the outermost layer of animal cells. Like fats, they are composed of fatty acid chains attached to a glycerol backbone. Unlike triglycerides, which have three fatty acids, phospholipids have two fatty acids that help form a diacylglycerol. The third carbon of the glycerol backbone is also occupied by a modified phosphate group However, just a phosphate group attached to a diacylglycerol does not qualify as a phospholipid. This would be considered a phosphatidate (diacylglycerol 3-phosphate), the precursor to phospholipids. To qualify as a phospholipid, the phosphate group should be modified by an alcohol. Phosphatidylcholine and phosphatidylserine are examples of two important phospholipids that are found in plasma membranes.

	Glycolipids	Phospholipids
Definition	Glycolipids are lipids containing carbohydrates	Glycolipids are lipids containing phosphate group
Composition	Lipid residue and carbohydrate moiety	Lipid residue and phosphate group
Structure	Hydrophilic head and hydrophobic tail	Hydrophilic head and two hydrophobic tails
Occurrence	Cell membrane	Bio- membrane such as cell membrane, lysosomal membrane, mitochondrial membrane, endoplasmic reticulum membrane, Golgi apparatus membrane etc.

