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MATRIC NUMBER: 18/MHS06/053

DEPARTMENT: MEDICAL LABORATORY SCIENCE

LEVEL: 200

COURSE: BCH 202

1. State 4 importance of cholesterol

**ANSWER**

The importance of cholesterol are;

* Helps to build the structure of cell membranes
* Helps metabolism work efficiently
* Essential for the body to produce vitamin D
* Produces hormones like estrogen, testosterone and adrenal hormones

1. Differences between globosides and gangliosides.

**ANSWER**

* Globosides have multiple sugars while ganglosides have multiple sugars including at least one sialic acid.
* Globoside head groups are neutal while gangloside head group are charged.
* Globosides are the determinants of the A, B, O blood group system while ganggliosides are complex glycolipids derived from glucocerebrosides.
* Globosides are important constituents of the RBC-membrane while the simplest gangloside found in tissues is GM3.

1. Methylated form of phosphatidyl ethanol amin is known as **LIPID METHYL TRANSFERASE**.
2. Which ring of cholesterol molecule contains a double bond?

**ANSWER**

The ring A contains a double bond in the cholesterol molecule.

1. State 3 properties of phosphoglycerides.

**ANSWER**

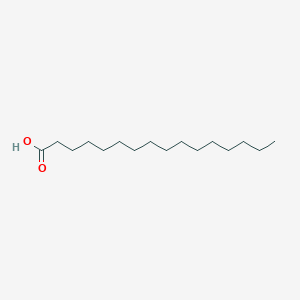
The properties of phosphoglycerides are;

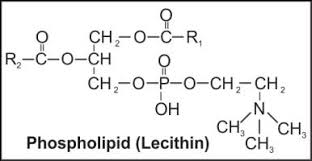
* The head group of phosphoglyceride are hydrophilic
* In phosphoglycerides, phosphate group of phosphatidic acid becomes esterified with the hydroxyl group of one of the several nitrogen base or other groups.
* In phosphoglycerides, the hydroxyl groups at C1 and C2 of glycerol are esterified with two fatty acids.

1. In a tabular form, differentiate between triacylglycerol and phosphosglyceride. State examples and with schematic structures.

**ANSWER**

|  |  |
| --- | --- |
| **TRIACYLGLYCEROL** | **PHOSPHOGLYCERIDE** |
| Has glycerol and three fatty acid | Has glycerol, two fatty acids and phosphorus |
| Fats cells store triacylglycerides | Helps break down fats in the body |
| Provides thermal insulation | Does not provide thermal insulation |
| Helps to give food its flavour | Does not help to give food its flavor |
| Stores energy | Does not store energy |
| Examples are palmitic acid, oleic acid | Examples are lecithin, cephalin |

 **STRUCTURE OF PALMITIC ACID**



**STRUCTURE OF LECITHIN**