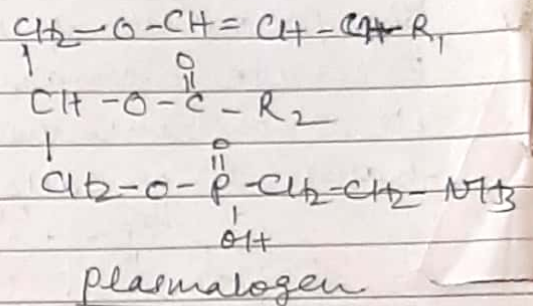
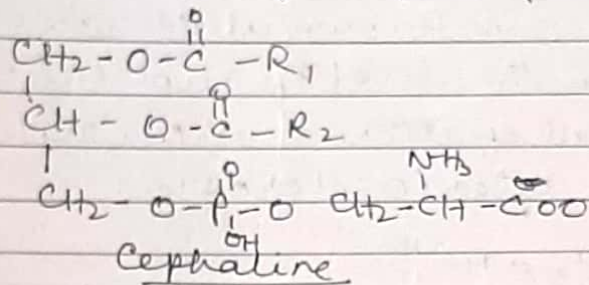


Lecithin help in synthesis of lipoprotein and transportation and utilization of lipids.

iii) Cephalin:- composition is similar to that of lecithin except ethanolamine, serine or amino acid instead of choline.

iv) Plasmalogen:-

These are composed of fatty acid, aliphatic aldehyde, glycerol, phosphoric acid along with a molecule of nitrogenous base either in the form of ethanolamine or choline. These are found in brain, muscle and seeds of higher plants.



v) Sphingomyelin → Esters formed by the combination of one molecule of fatty acid, one molecule of phosphoric acid, one molecule of choline and a nitrogenous base in the form of sphingosine with glycerol. These are present in brain and myelin sheath.

b) Glycolipid: Glycolipid is formed as —
 Fatty acid + Sphingosine + glucose or galactose → Glycolipid
 It ~~is not~~ includes cerebrosides and gangliosides.

i) Cerebrosides → These form white matter of brain and myelin sheath of nerve.

ii) Gangliosides — Ganglioside serves as antigen and form grey matter of brain, membrane of RBC.

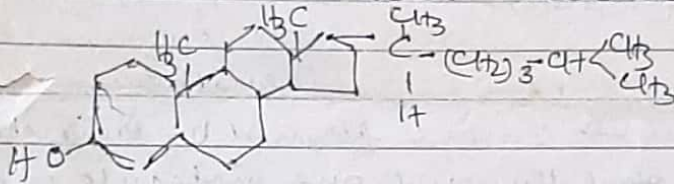
c) Lipoprotein:- Compound lipid having protein as third ~~chemical~~ additional chemical substance. It is found in blood and form plasma membrane including mitochondria and microsomes, plasma as well as in the transportation of lipid to the tissues.

The have 17 carbon cyclic structure and are called cyclopentano perhydrophenanthrene.

c) DERIVED LIPIDS :-

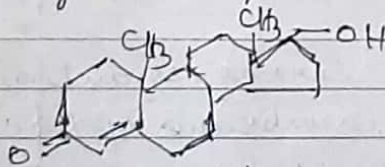
Lipid like substances, obtained on the hydrolysis of simple lipid or compound lipids are known as derived lipid. These differ from simple or compound lipids in having Cyclic Structure rather than straight chain. These include sterol, steroid and colour pigment.

i) Sterol :- Wax like solid alcohol of steroids are known as sterole. The most common sterol present in animals is Cholesterol. It is present in human blood plasma. It help in synthesis of membrane lipid, steroid hormones, bile salt and vitamin D. The precursor of vit. D is known as ergosterol. Excessive increase in the level of cholesterol causes its deposition in the wall of arteries which make them hard. It is called arteriosclerosis.

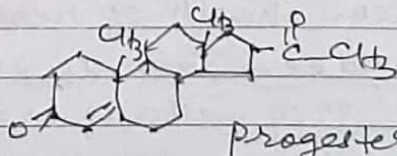


Cholesterol

ii) Steroids :- Biologically active soluble lipids having cyclical structure is known as steroids. These includes hormones secreted by adrenal cortex such as mineralocorticoids and glucocorticoids. Sex-hormone secreted by gonads such as estrogen, progesterone, testosterone, Vit A, D, E & K, bile acid etc.



Testosterone



Progesterone

Function of lipids :-

- 1) Lipids are high energy yield. On oxidation 1 gm of lipid yield 9.3 calories energy. plasma membrane
- 2) It help in synthesis of hormones, vitamins etc.
- 3) It act as insulator and reserve food material.

