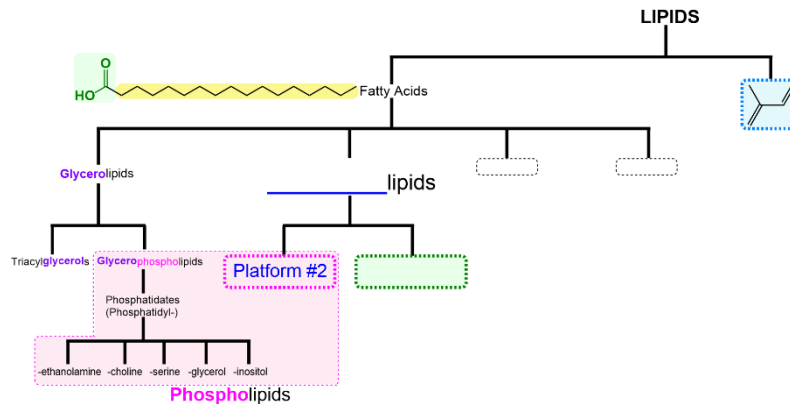


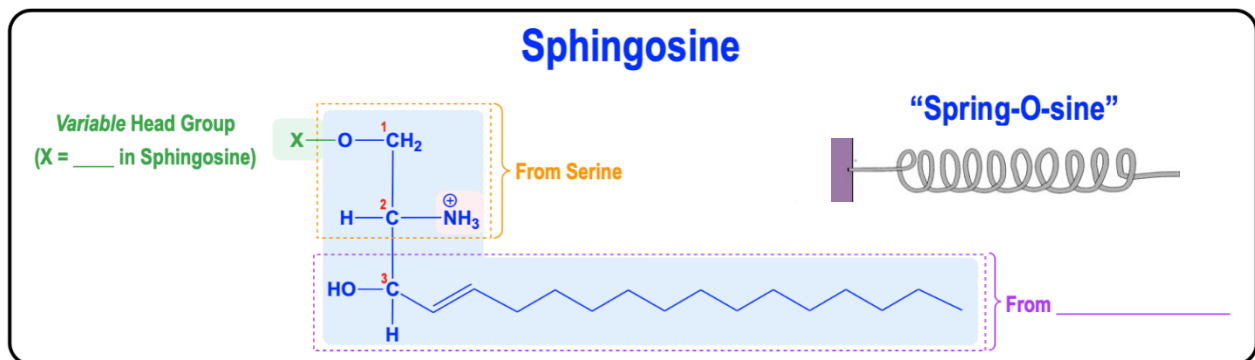
## CONCEPT: SPHINGOLIPIDS

### Clutch Prep Lipid Map



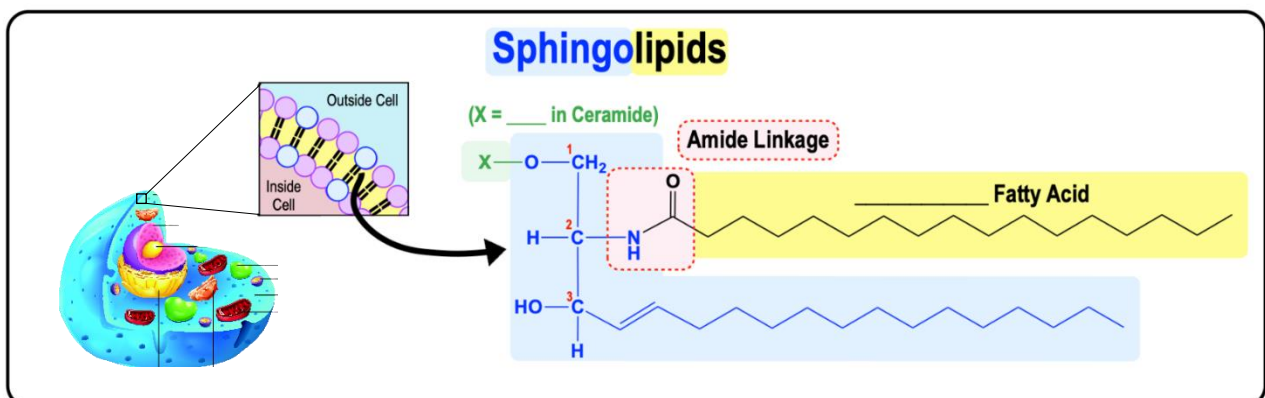
### Sphingosine

- \_\_\_\_\_: an *unsaturated* \_\_\_\_\_-carbon *amino alcohol* (with a *trans* double bond).
  - Derived from the fatty acid *palmitate* & a \_\_\_\_\_ amino acid.
  - Sphingosine's C1, C2 & C3 are *structurally analogous* to \_\_\_\_\_'s carbons in glycerophospholipids.
  - Sphingosine can be modified to contain *variable head groups* (-X).



### Sphingolipids

- \_\_\_\_\_ *lipids*: lipids containing a \_\_\_\_\_ *molecule* (or one of its derivatives) instead of a glycerol.
  - Only one, *variable* fatty acid is attached to sphingosine's C2 via an \_\_\_\_\_ *linkage*.
  - 2<sup>nd</sup> most abundant lipids in eukaryotic cell membranes.
  - The *variable head group* (-X) is attached via either a *phosphodiester* or a *glycosidic* linkage.



**CONCEPT: SPHINGOLIPIDS**

**PRACTICE:** Which component is found in all sphingolipids?

- a) A carbohydrate.
- b) A negative charge.
- c) A phosphate group.
- d) An amino alcohol.
- e) All the above are found in all sphingolipids.
- f) None are found in sphingolipids.

**PRACTICE:** Which of the following is true about sphingolipids?

- a) They are all phospholipids.
- b) They all contain a carbohydrate backbone.
- c) They can have either a phosphodiester or a glycosidic linkage to their polar head group.
- d) They all contain a glycerol molecule backbone.
- e) None of the above are true.