

CONCEPT: MEMBRANE STRUCTURE

22. The phospholipase that is likely to remove an unsaturated fatty acid from a phospholipid is:

- a. phospholipase A1.
- b. phospholipase A2.
- c. phospholipase C.
- d. phospholipase D.

23. The shortest helix segment that could span a biological membrane has about _____ amino acids.

- a. 5
- b. 20
- c. 50
- d. 100
- e. 200

24. An integral membrane protein can be extracted with:

- a. a buffer of alkaline or acid pH
- b. a chelating agent that removes divalent cations
- c. a solution containing detergent
- d. a solution of high ionic strength
- e. hot water

25. Which of the following are *not* enzymes involved in moving phospholipids from one leaflet to another?

- a. Flippases that move phosphatidylethanolamine and phosphatidylserine
- b. Floppases that move phospholipids from the cytosolic leaflet to the extracellular leaflet
- c. Flip-flopases that allow phospholipids to move back and forth between the inner and outer leaflets
- d. Scramblases that allow phospholipids to move down their concentration gradient
- e. Phosphatidylinositol transfer proteins that play a role in lipid signaling.

26. The plasma membrane of animal cells contains 45% by weight of phospholipid and 55% of protein. What is the mole ratio of lipid to protein assuming the average molecular weight of phospholipid is 750 daltons and the average molecular weight of membrane proteins is 60,000 daltons?