



### The Cell Membrane

The cell membrane separates the remainder of the cell from the exterior. In doing so, it regulates the cell interior for optimal functioning by maintaining more or less specific and constant internal conditions. The cell membrane controls what may enter and leave the cell, the responsiveness of the cell to external stimuli, the selectiveness with which the cell binds to other cells or to a substratum, and the maintenance of cell shape. The bilayered structure of the cell membrane results from the opposing phospholipids that compose it. Proteins are also important membrane constituents and may span it or may be attached to the inner or outer surfaces. The exposed outer surfaces of membrane proteins and lipids may have carbohydrates attached to them like tails that radiate into the surrounding medium. Together these tails and especially their extracellular peripheral proteins form a **glycocalyx**, which is an important physiological barrier that forms a template on which exoskeletons are secreted, and regulates binding to signal molecules and to surfaces, such as other cells.

