



**Figure 3.2**  
A composite cell. Organelles are not drawn to scale.

## Cell Membrane

The cell membrane is more than a simple boundary surrounding the cellular contents. It is an actively functioning part of the living material. The cell membrane regulates movement of substances in and out of the cell and is the site of much biological activity. Molecules that are part of the cell membrane receive stimulation from outside the cell and transmit it into the cell, a

process called *signal transduction*. The cell membrane also helps cells adhere to certain other cells, which is important in forming tissues.

### General Characteristics

The cell membrane is extremely thin—visible only with the aid of an electron microscope—but it is flexible and somewhat elastic. It typically has complex surface