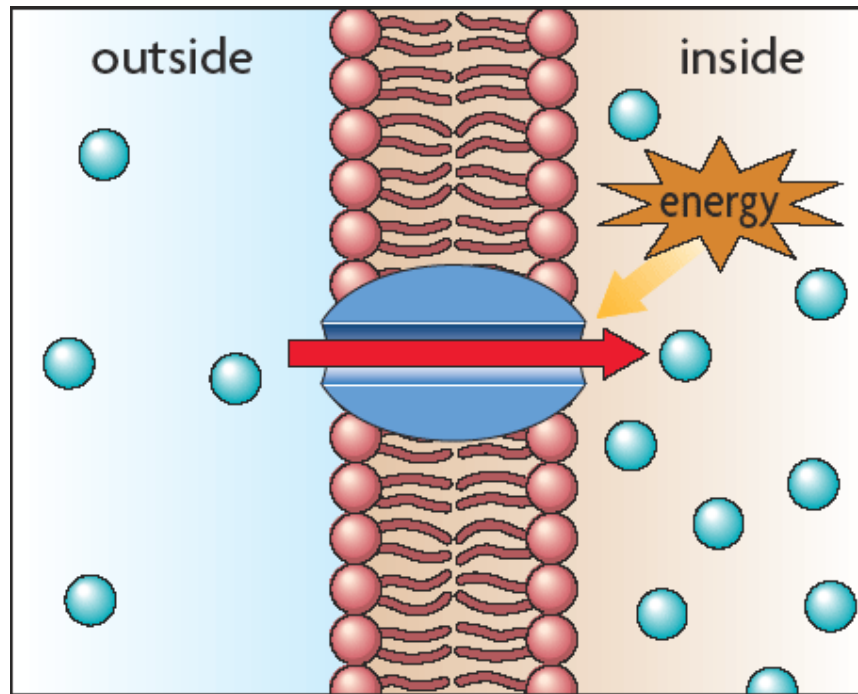


3.5 Active Transport, Endocytosis, and Exocytosis

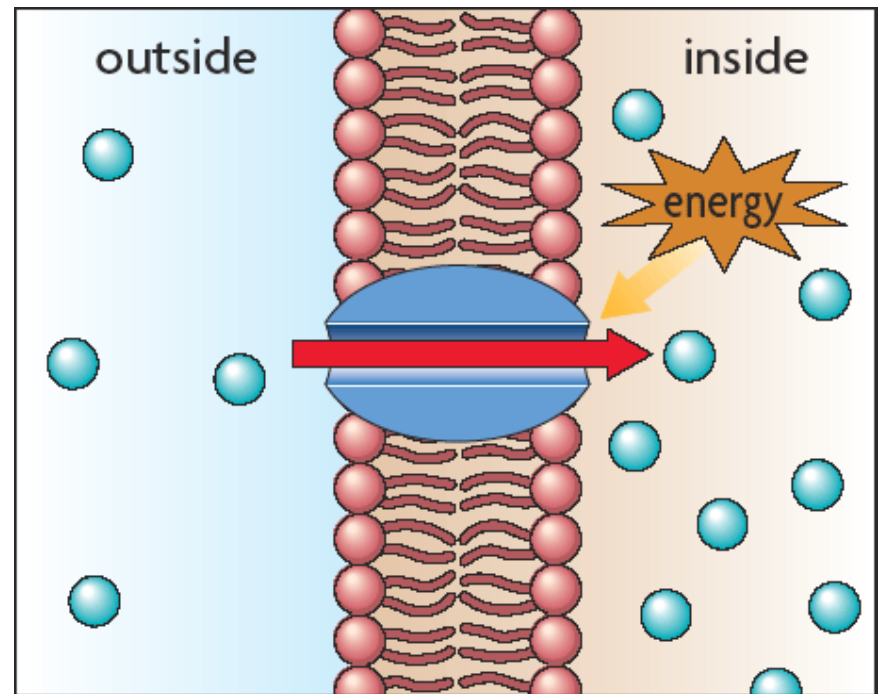
KEY CONCEPT Cells use energy to transport materials that cannot diffuse across a membrane.



3.5 Active Transport, Endocytosis, and Exocytosis

Active transport requires energy input from a cell and enables a cell to move a substance against its concentration gradient.

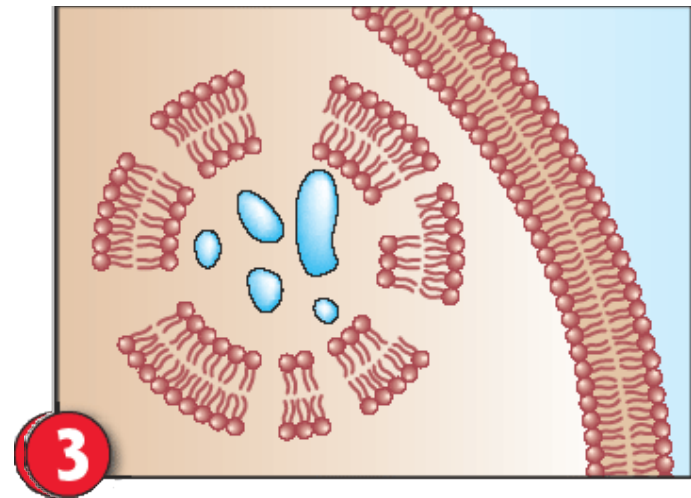
- Passive transport requires no energy from the cell.
- Active transport is powered by chemical energy (ATP).
- Active transport occurs through transport protein pumps.
- Cells use active transport to maintain homeostasis.

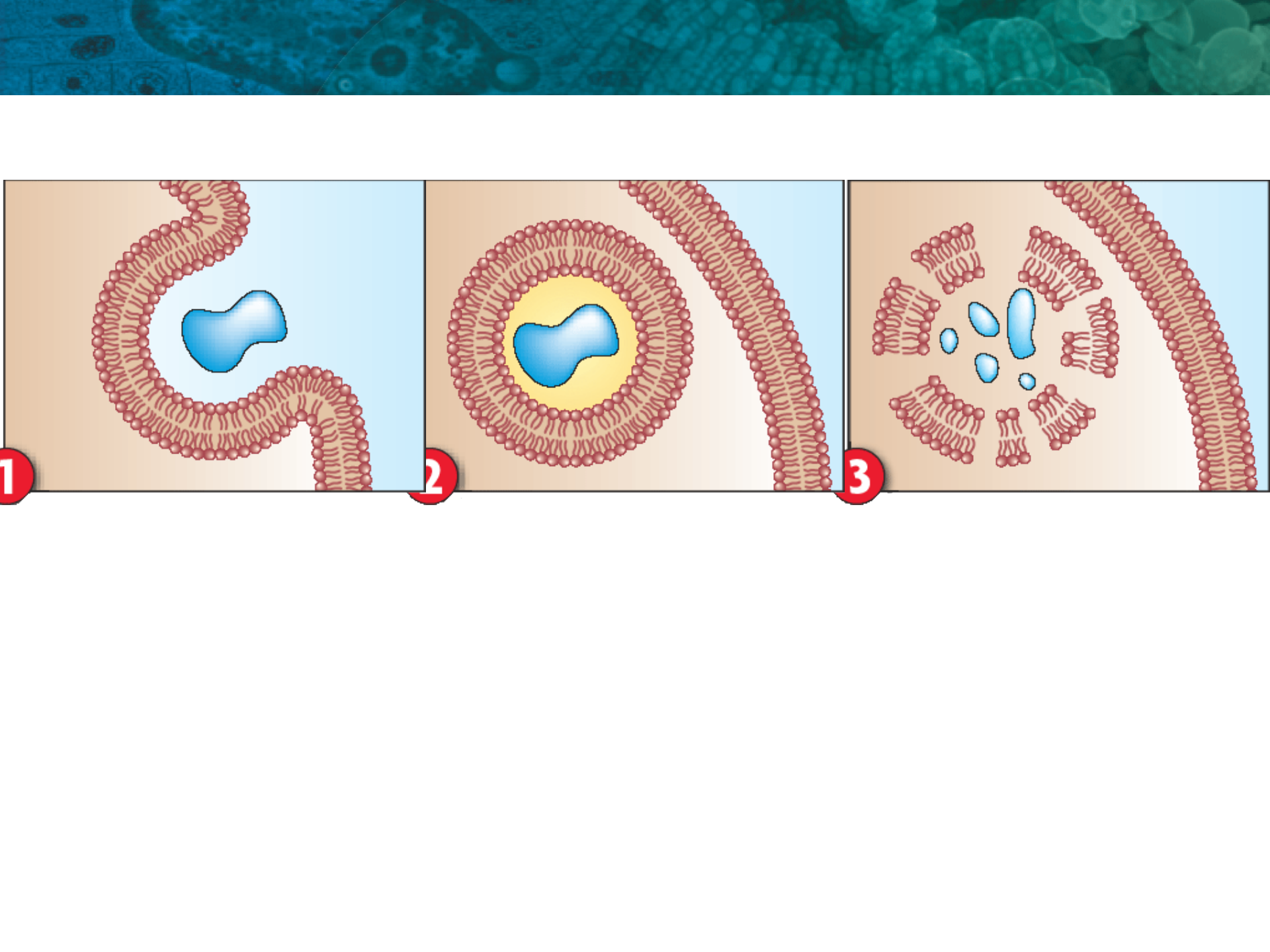


3.5 Active Transport, Endocytosis, and Exocytosis

A cell can import and export large materials or large amounts of material in vesicles during the processes of endocytosis and exocytosis.

- Cells use energy to transport material in vesicles.
- Endocytosis is the process of taking material into the cell.
- Phagocytosis is a type of endocytosis.





3.5 Active Transport, Endocytosis, and Exocytosis

A cell can import and export large materials or large amounts of material in vesicles during the processes of endocytosis and exocytosis.

- Cells use energy to transport material in vesicles.
- Exocytosis is the process of expelling material from the cell.

