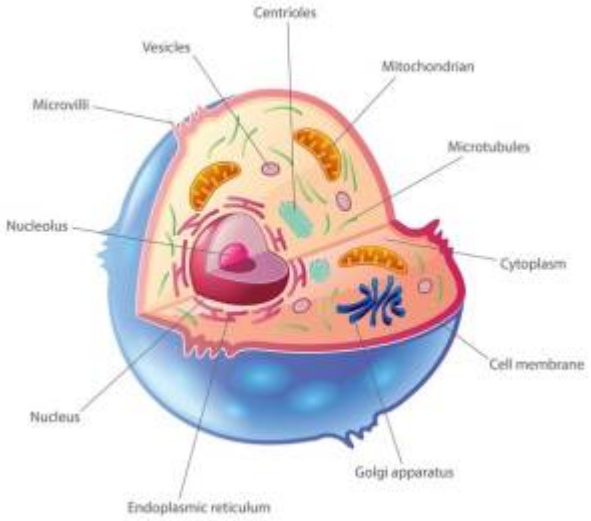
Organelle

Since the first descriptions of extracellular vesicles (EV) [1) 2)], much interest has arisen regarding these small secreted organelles and their role in human disease



In cell biology, an organelle is a specialized subunit within a cell that has a specific function, in which their function is vital for the cell to live. Individual organelles are usually separately enclosed within their own lipid bilayers, but cannot be bound by one.

The name organelle comes from the idea that these structures are parts of cells, as organs are to the body, hence organelle, the suffix -elle being a diminutive. Organelles are identified by microscopy, and can also be purified by cell fractionation. There are many types of organelles, particularly in eukaryotic cells. While prokaryotes do not possess organelles per se, some do contain protein-based bacterial microcompartments, which are thought to act as primitive organelles.

1)
Pan BT, Teng K, Wu C, Adam M, Johnstone RM: Electron microscopic evidence for externalization of the transferrin receptor in vesicular form in sheep reticulocytes. J Cell Biol 1985;101:942–948.
2)
Harding C, Heuser J, Stahl P: Receptor-mediated endocytosis of transferrin and recycling of the transferrin receptor in rat reticulocytes. J Cell Biol 1983;97: 329–339.