



ACROSS

- 3 The _____ system is the system of internal membranes within eukaryotic cells that divide the cell into functional and structural compartments, or organelles.
- 6 Nuclear _____s are large protein complexes that cross the nuclear envelope, which is the double membrane surrounding the eukaryotic cell nucleus.
- 8 _____ is a gelatinous, semi-transparent fluid that fills most cells.
- 10 _____s are the thinnest filaments of the cytoskeleton found in the cytoplasm of all eukaryotic cells. These linear polymers of actin subunits are flexible and relatively strong.
- 11 A _____ is an organelle found in eukaryotic cells. It is a thin, tail-like projection extending approximately 5-10 micrometers outwards from the cell body.
- 13 A _____ body is an organelle formed from a centriole, a short cylindrical array of microtubules. It is found at the base of a eukaryotic undulipodium (cilium or flagellum) and serves as a nucleation site for the growth of the axoneme microtubules.
- 14 _____ is the protein which serves as the monomeric subunit of microfilaments, one of the three major components of the cytoskeleton, and of thin filaments which are part of the contractile apparatus in muscle cells.
- 16 A _____ comprises a flattened

membrane disk which makes up the Golgi apparatus.

- 18 _____s are organelles that contain digestive enzymes to digest excess or worn out organelles, food particles, and engulfed viruses or bacteria.
- 21 _____s are major organelles found in plants and algae responsible for photosynthesis, storage of products like starch and for the synthesis of many classes of molecules such as fatty acids and terpenes.
- 22 A _____ is one of several members of a small family of globular proteins. The most common members this family are the proteins which makes up microtubules.
- 24 The _____ is a membrane-enclosed organelle found in most eukaryotic cells which contains the cell's genetic material.
- 25 The _____ is the inner cytoskeletal structure of eukaryotic cilia or flagella.
- 26 _____s are organelles found in plant cells and eukaryotic algae that conduct photosynthesis. They are generally considered to have originated as endosymbiotic cyanobacteria.
- 27 _____s are ubiquitous organelles in eukaryotes that participate in the metabolism of fatty acids and other metabolites. They have enzymes that rid the cell of toxic peroxides.
- 28 The nuclear _____ or membrane is the double membrane

of the nucleus that encloses genetic material in eukaryotic cells.

- 29 Animals, plants, fungi, and protists are _____s, which are organisms whose cells are organized into complex structures by internal membranes and a cytoskeleton.

DOWN

- 1 A _____ is a barrel shaped organelle found in most eukaryotic cells with walls usually composed of nine triplets of microtubules.
- 2 The _____ is the main microtubule organizing center of the cell as well as a regulator of cell-cycle progression.
- 3 The _____ theory concerns the origins of mitochondria and plastids, according to which these organelles originated as separate prokaryotic organisms which were taken inside the cell as endosymbionts.
- 4 A nuclear _____ signal is an amino acid sequence which acts like a 'tag' on the exposed surface of a protein to target the protein to the cell nucleus through the nuclear pore complex and to direct it into the nucleus via its recognition by cytosolic nuclear transport receptors.
- 5 _____-tubular cluster is an intermediate compartment mediating trafficking between the endoplasmic reticulum and Golgi complex.
- 7 The _____ is a cellular scaffolding or skeleton contained

within the cytoplasm.

- 9 A _____ is a membrane-enclosed organelle that is found in most eukaryotic cells that. In addition to supplying cellular energy, they are involved in a range of other processes.
- 12 _____ filaments are cytoskeletal structures formed by members of a family of related proteins. These filaments have a diameter between that of actin microfilaments and microtubules.
- 15 The _____ apparatus is an organelle found in most eukaryotic cells the primary function of which is to process and package the macromolecules such as proteins and lipids that are synthesized by the cell.
- 17 The spindle _____ is a structure of the eukaryotic cytoskeleton involved in mitosis and meiosis, often referred to as the mitotic spindle during mitosis and the meiotic spindle during meiosis.
- 19 The _____ is a sub-organelle of the cell nucleus. Its main function is the production and assembly of ribosome components.
- 20 A _____ is a specialized subunit within a cell, having a specific function, and separately enclosed within its own lipid membrane.
- 23 A _____ is a relatively small and enclosed compartment, separated from the cytosol by at least one lipid bilayer.