

# Animal and Plant Organelles

Skylar Lowden

Maria Rios

Joshua Judge

Chadejah Hunter

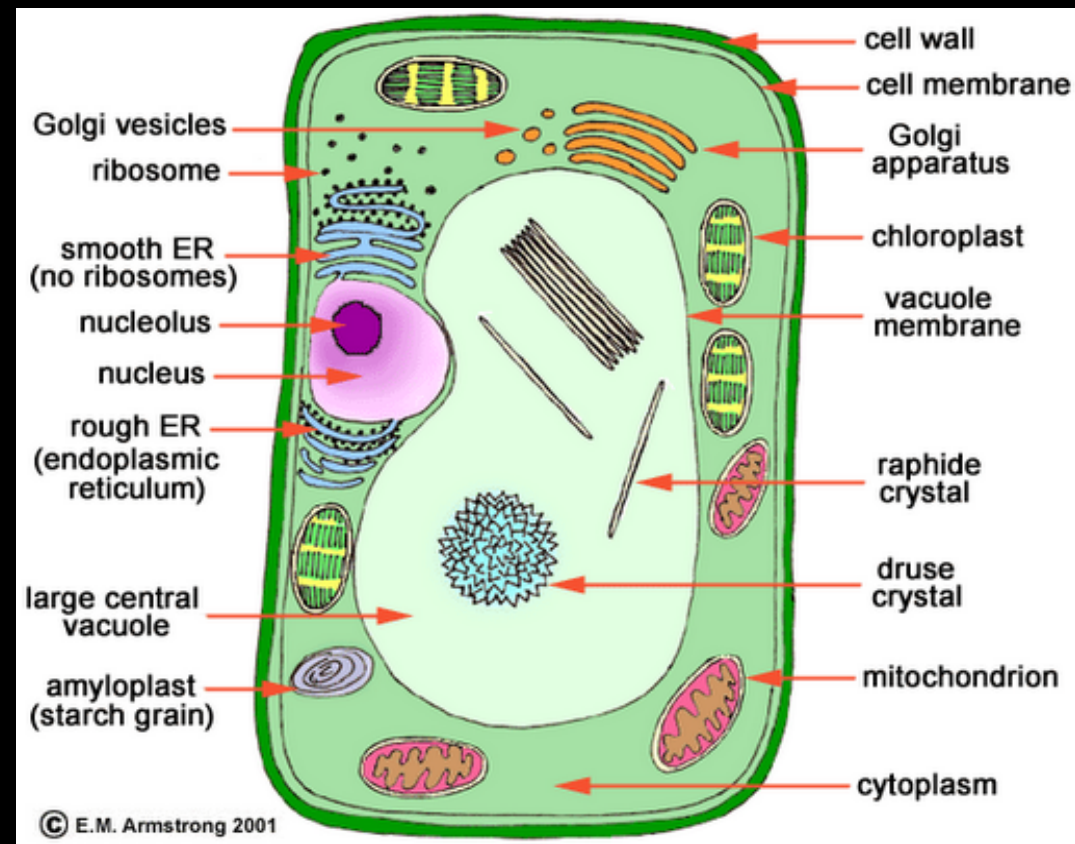
Linda Garza

2nd Block



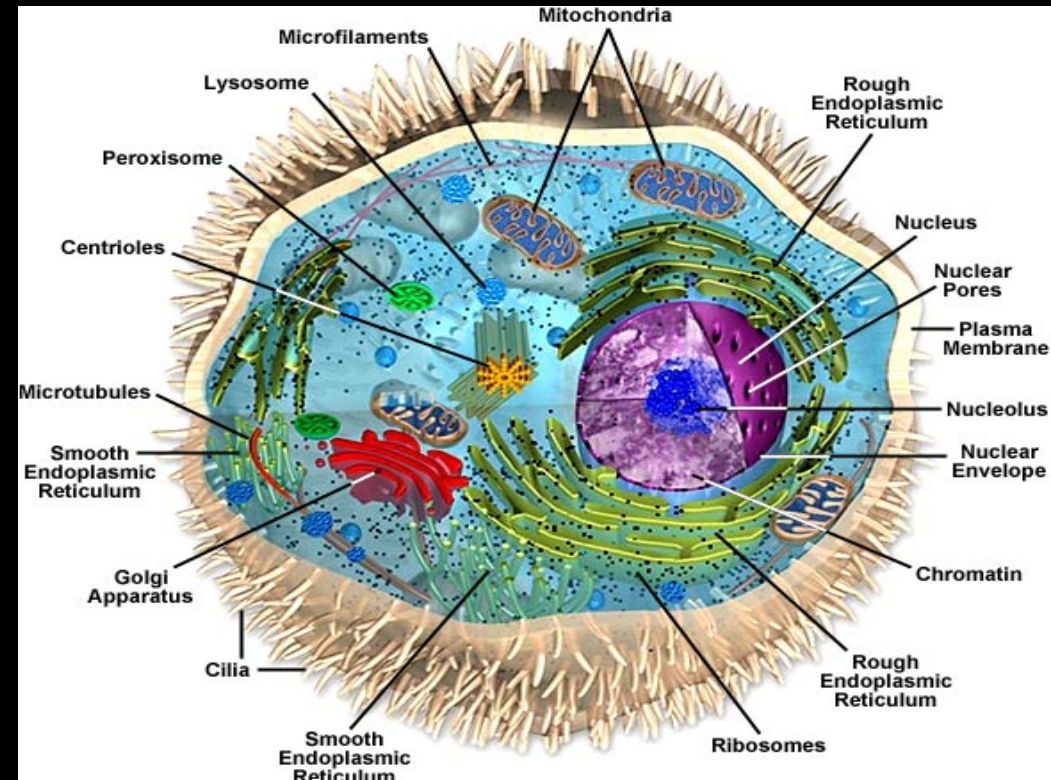
# Plant Cell Analogy

The plant cell is just like a circus.



# Animal Cell Analogy

The animal cell is just like a mall.





# Centrioles

## **What Are Centrioles-**

Centrioles are organelles that are made up of nine bundles of microtubules.

## **Where Are They Found-**

They are only found in animal cells.

## **What Do They Do-**

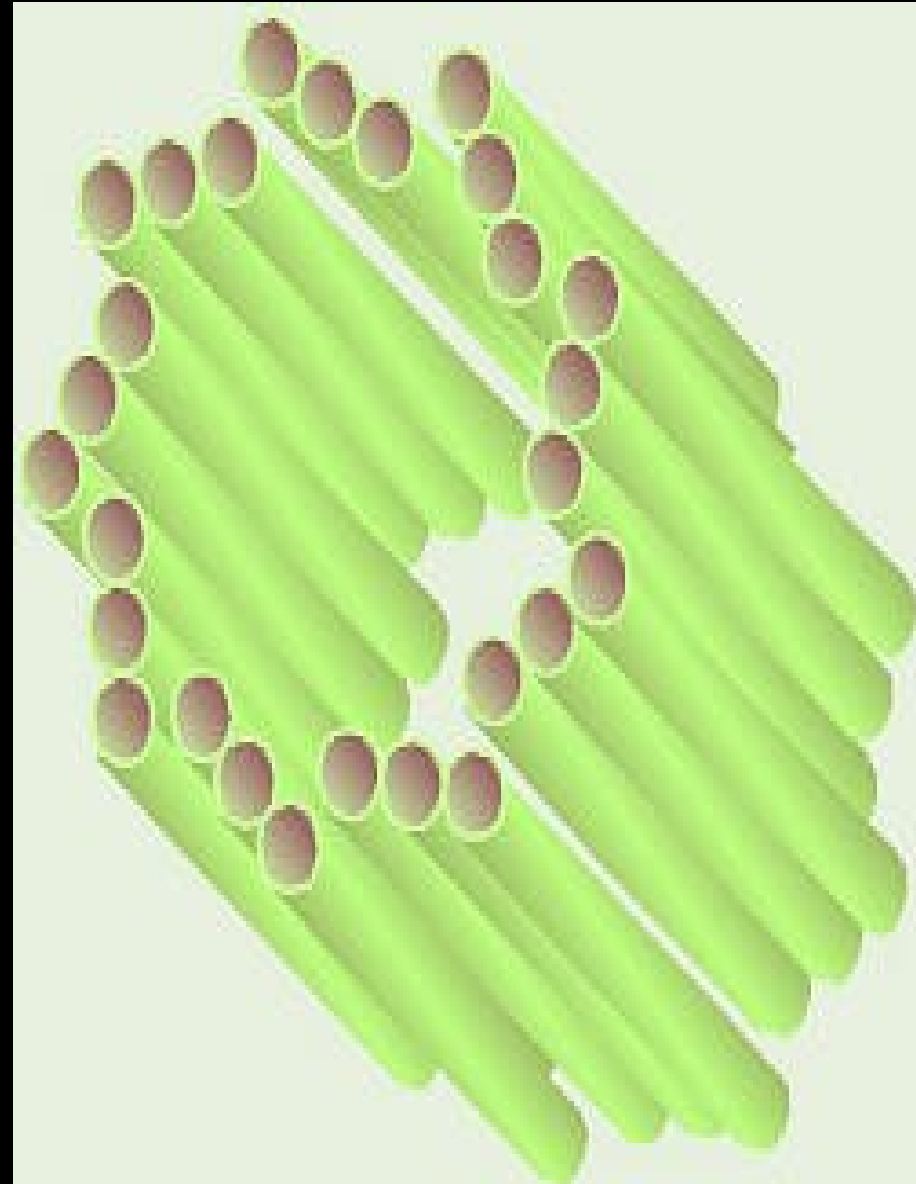
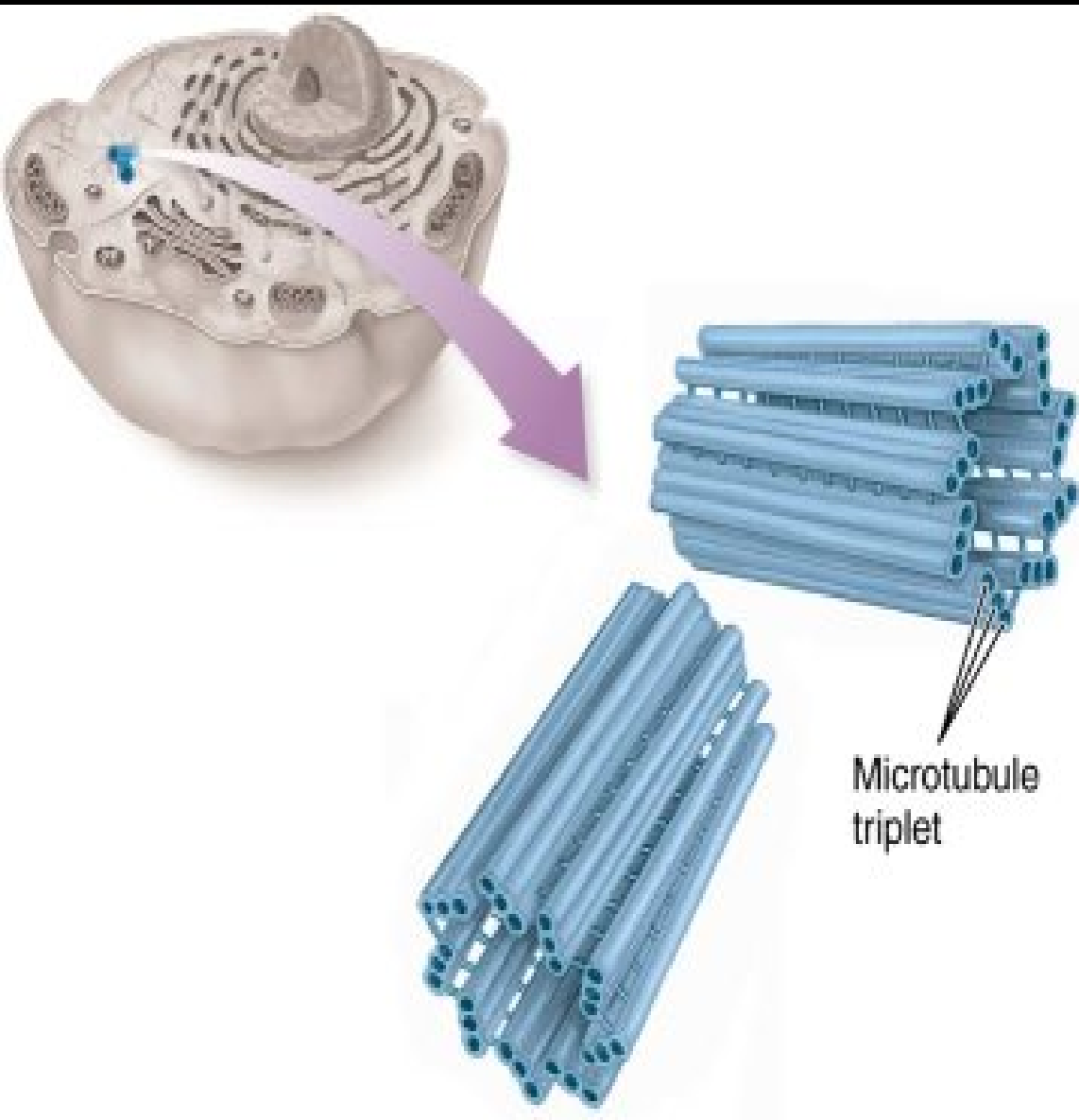
They appear to help in organizing cell division, but aren't essential to the process.

# Centrioles Analogy



**Analogy-**  
Centrioles  
would be the  
floors of the mall  
and how they  
divide each  
based on the  
products.

# The Centrioles



# Nucleus

## **What Is The Nucleus-**

It contains the cells heredity information (DNA) and controls the cells growth and reproduction.

## **Where Are They Found-**

The nucleus is found in all eukaryote cells.

## **What Do They Do-**

The nucleus controls all functions of the cells.

# Nucleus Analogy

**Circus-**

**The nucleus would play the spot of the ring leader. It controls all the acts, like a nucleus controls all the functions.**

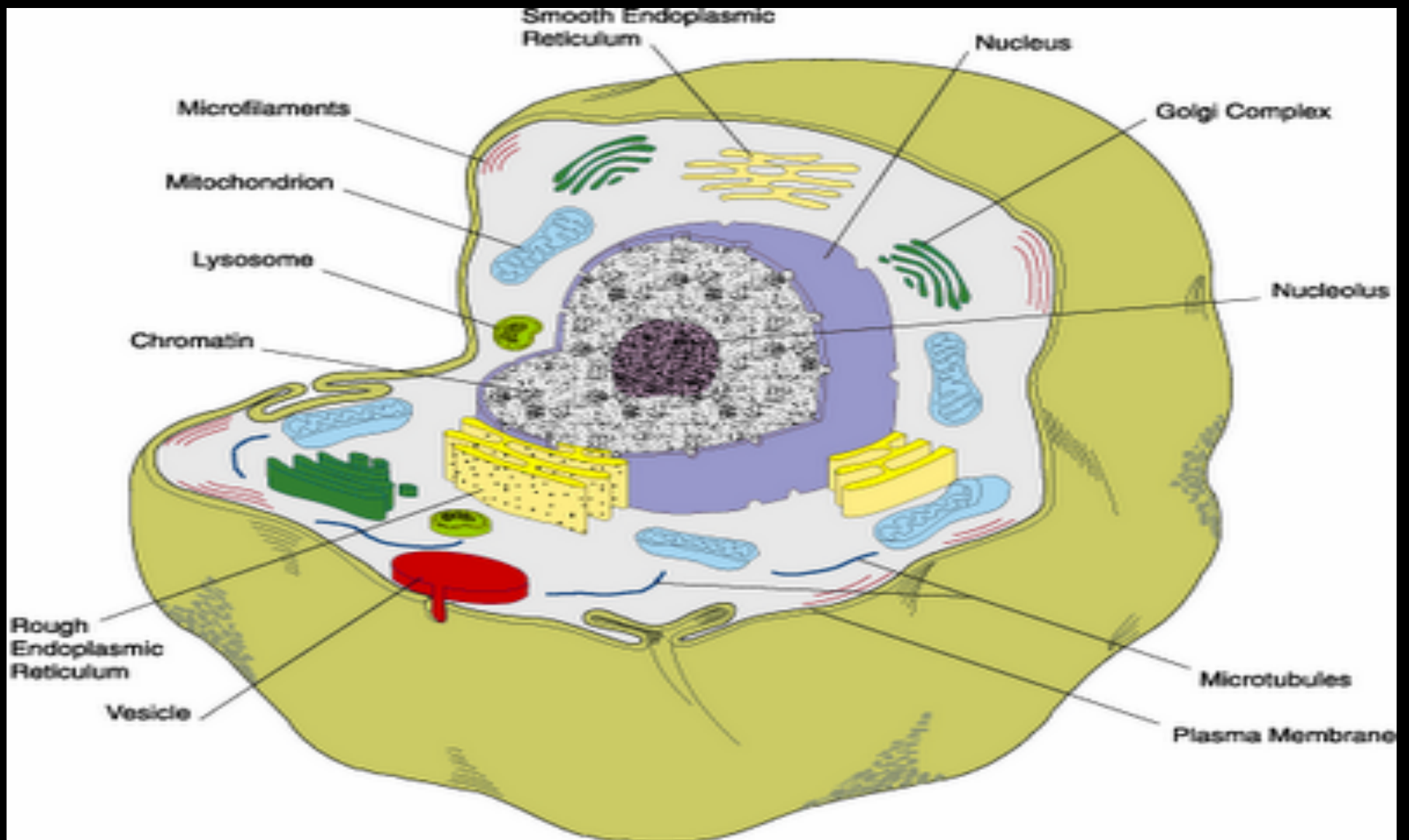






**Mall-**  
**The nucleus would be the power**  
**room or the control room of the**  
**mall.**

# The Nucleus



# Chloroplasts

**What are chloroplasts-**

A plastid containing chlorophyll and other pigments.

**Where are they found-**

They are found only in plant cells.

**What do they do-**

They have the ability to photosynthesize.

# Chloroplasts Analogy

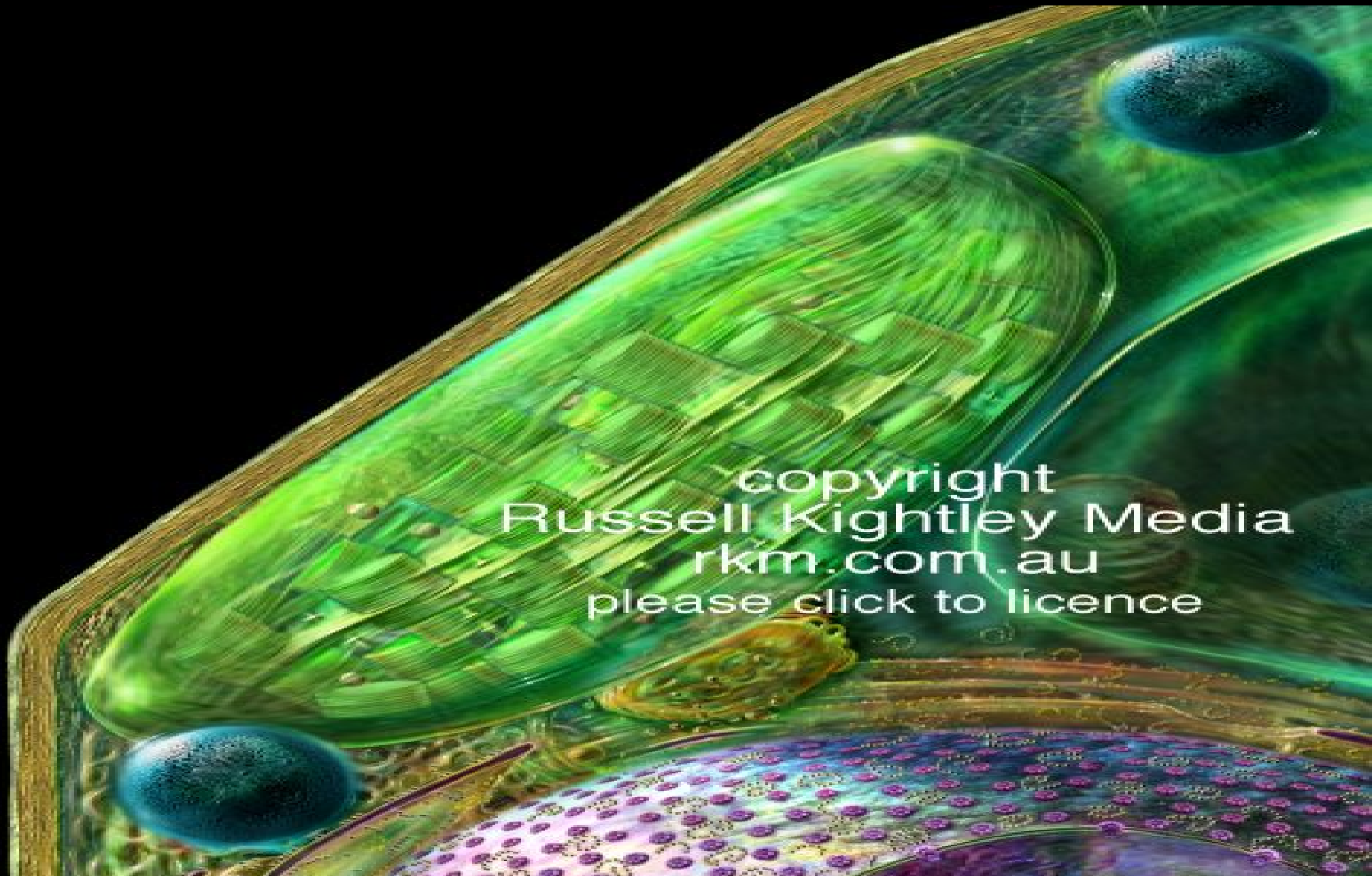
## Analogy-

Chloroplasts is like the cotton candy man. It helps the plant make it's food and sugar, just like the cotton candy man gives you food which contains sugar.





# The Chloroplast



copyright  
Russell Kightley Media  
rkm.com.au  
please click to licence

# Plasma Membrane

## **What is a Plasma Membrane-**

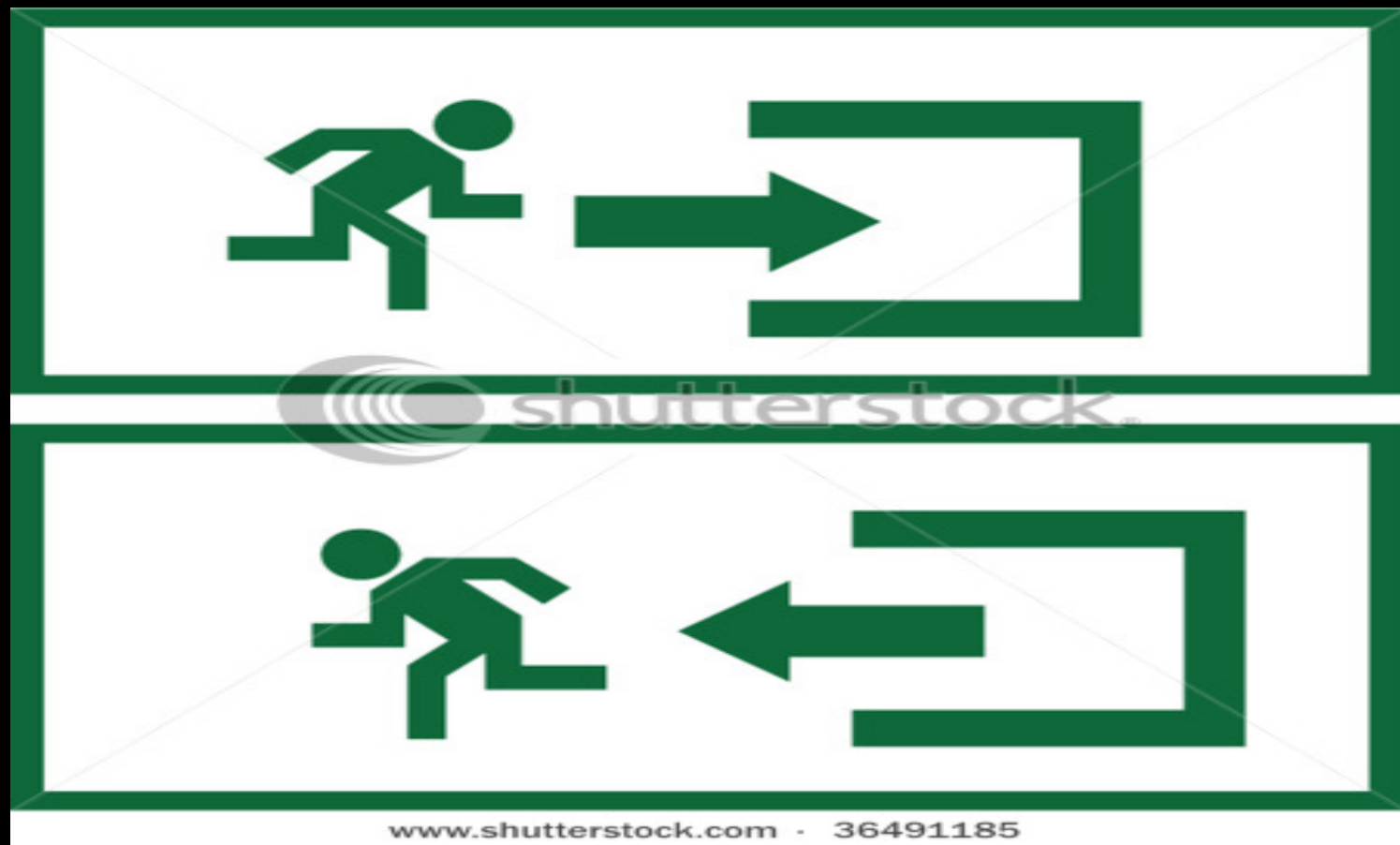
Is in charge of cell transport; two layers of phospholipids with proteins

## **Where is it located-**

In both animal and plant cells. Outer coating for animals; plants it's beneath the cell wall.

# What does it do-

Acts like a pump pushing the substances that enter and leave.



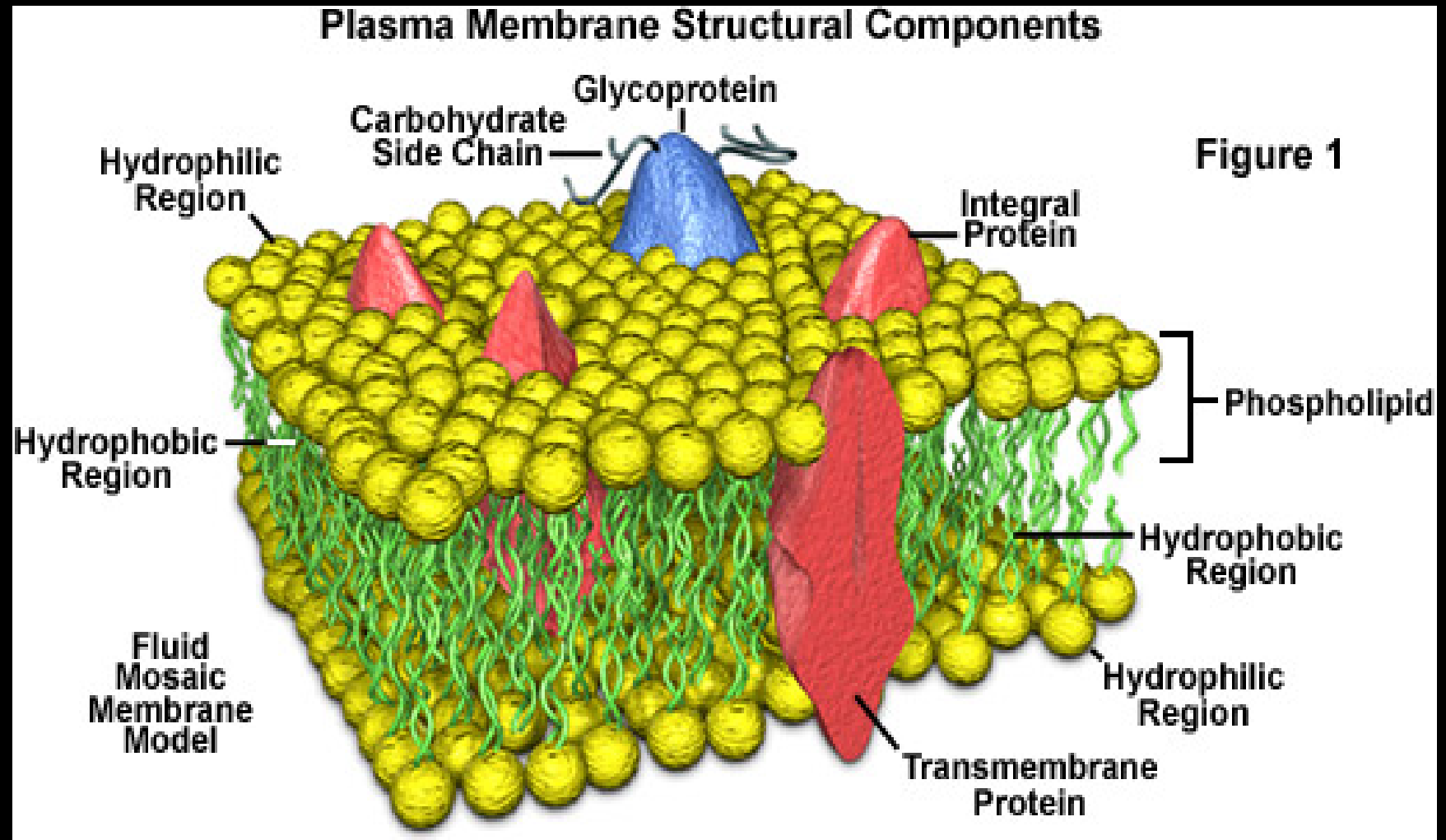
# Plasma Membrane

Plasma membrane plays the role of circus ushers. Circus ushers welcome and say goodbye when people come and go. In a cell the plasma membrane controls all that enter and leave the cell.





# Plasma Membrane



# Cytoskeleton

**What is the Cytoskeleton**

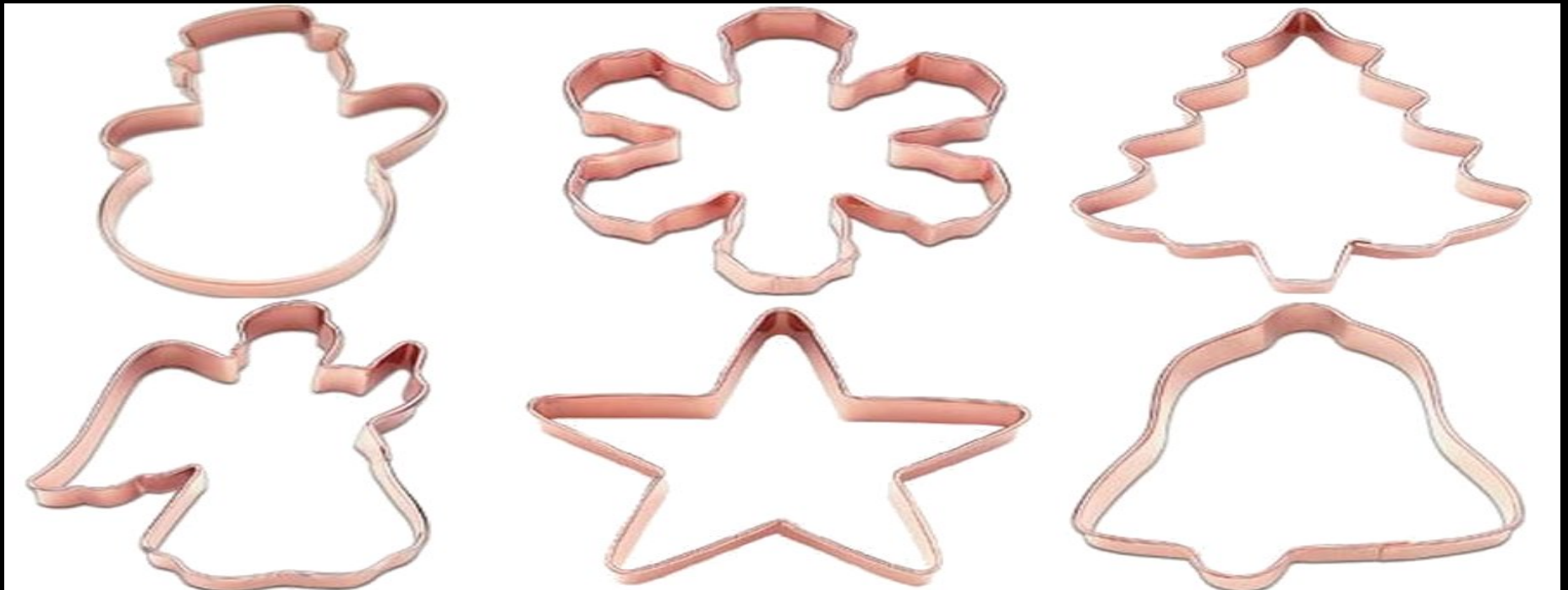
a microscopic network of filaments and microtubules in the cytoplasm.

**Where are they found**

They are found in both animal and plant cells.

# What do they do-

It maintains the cells shape as well as protects the cell, enables circular motion, and plays an important part in cellular division and intracellular transport.



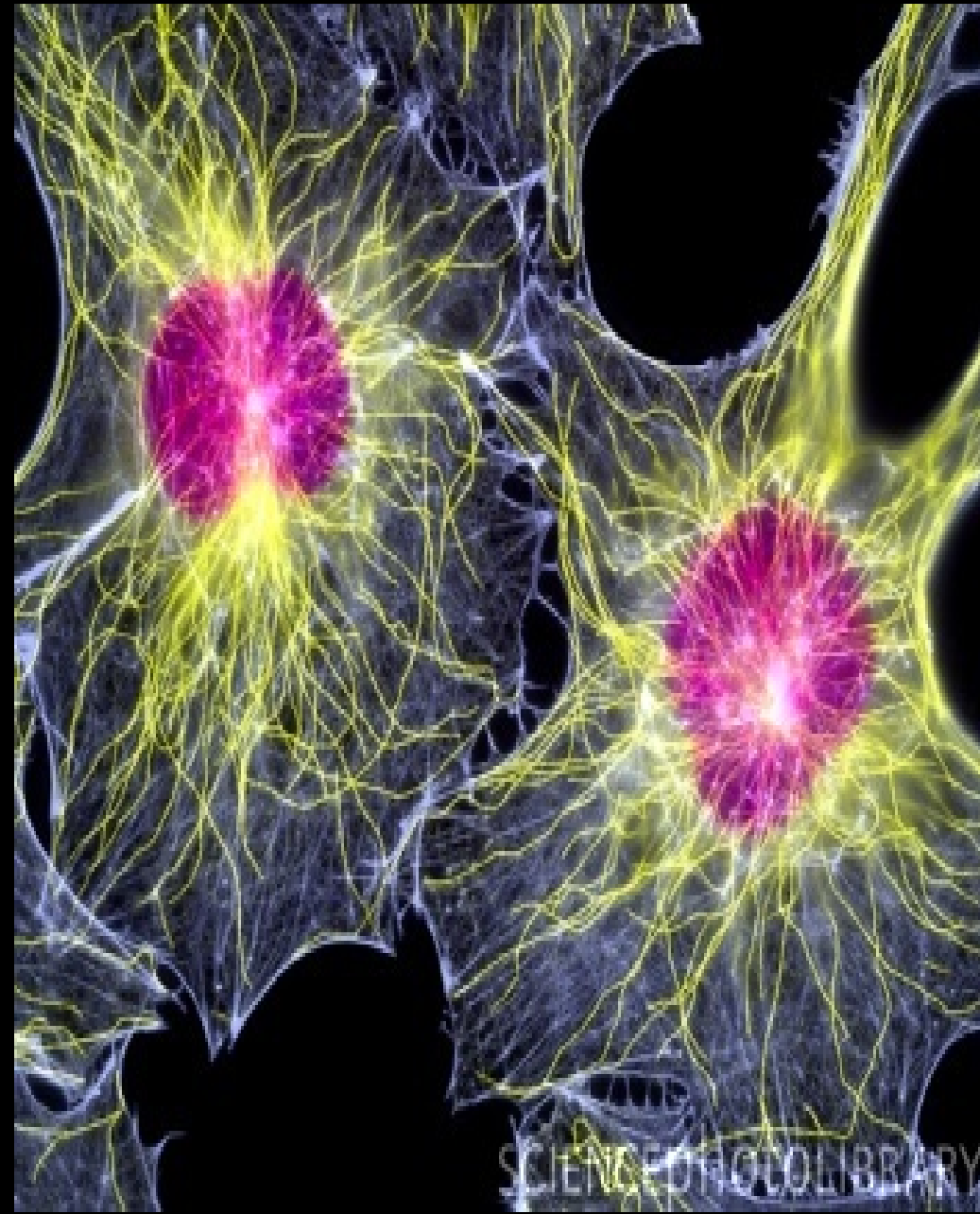
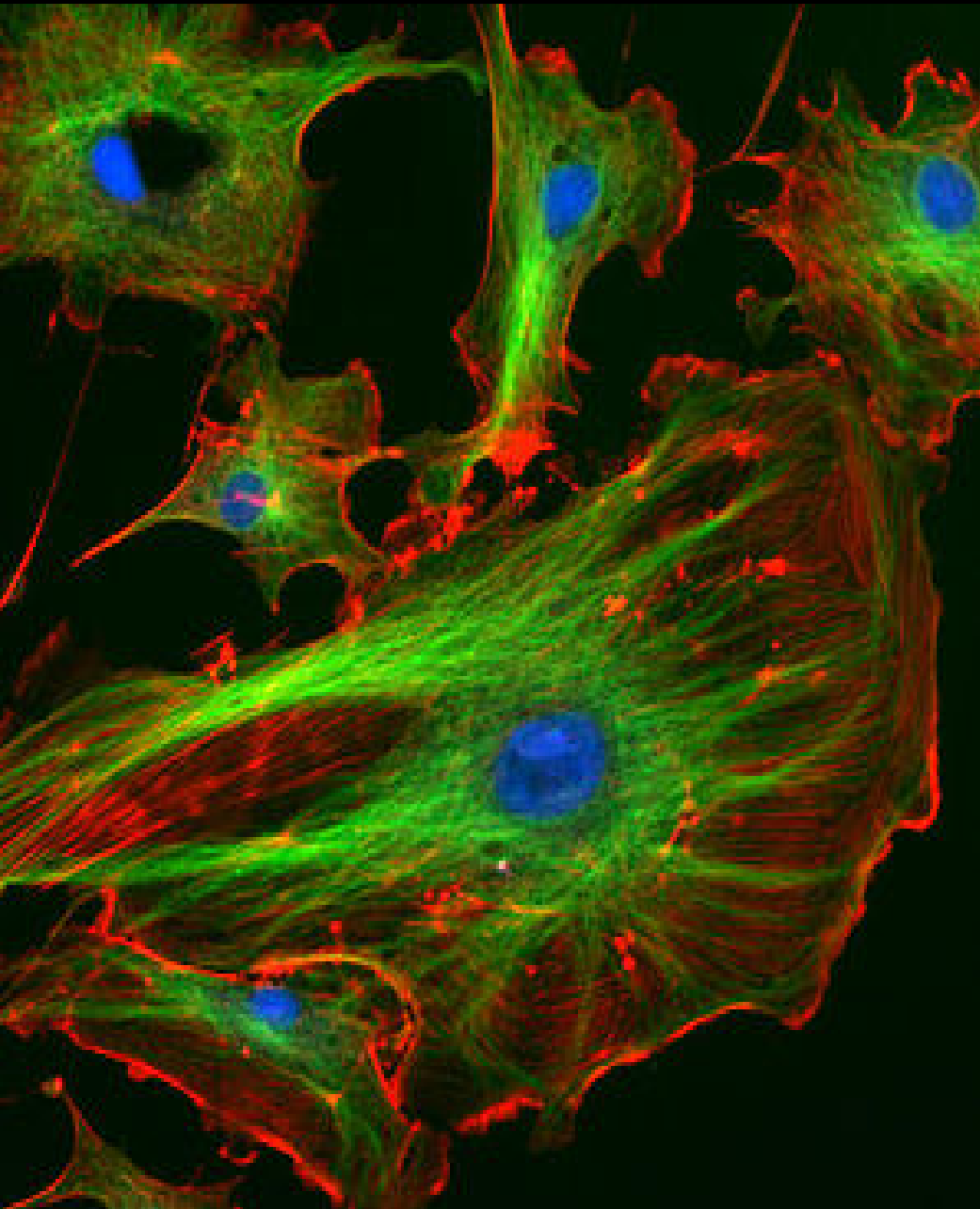
# Cytoskeleton Analogy

Cytoskeleton plays the part of the support beams. They hold up the cell and give it its shape, just like the support beams hold up the tent.





# The Cytoskeleton



# Endoplasmic Reticulum

## **What is it-**

is a network of sacs. It's connected to to the double-layered nuclear envelope, providing a pipeline between a nucleus and the cytoplasm.

## **What does it do-**

it manufactures, processed, and transports chemical compounds for use inside and outside the cell.

## **Where is it found-**

It is found in both animal and plant cells.

# Endoplasmic Reticulum

Circus-

The Endoplasmic reticulum is the aisles between the seats, just like the endoplasmic reticulum allows ribosomes to move.



# Endoplasmic Reticulum

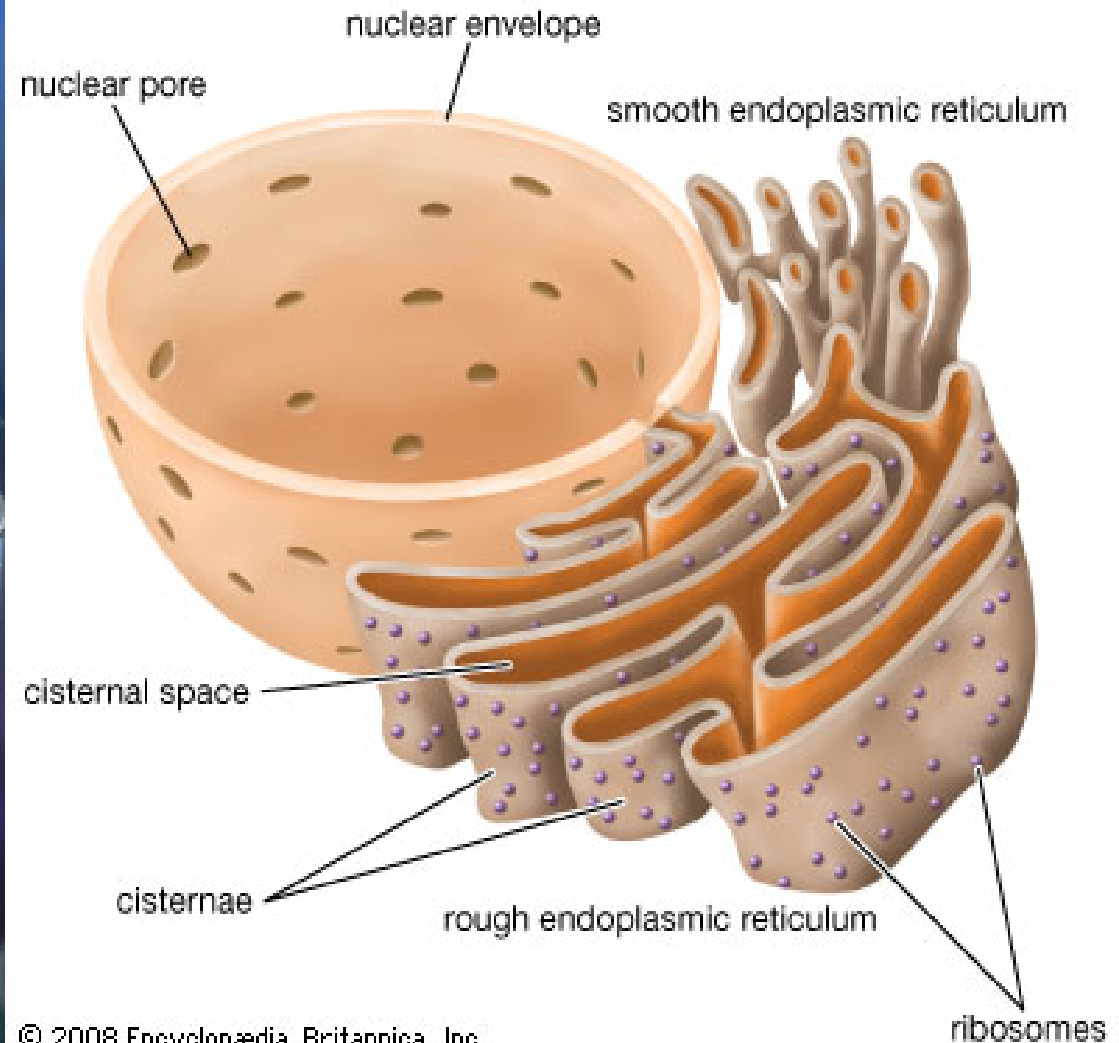
Mall-  
Endoplasmic  
Reticulum would be the  
pathways, elevators, or  
escalators. They are  
transporters that take  
people around the mall  
to different levels.



# Endoplasmic Reticulum



**Endoplasmic reticulum**



© 2008 Encyclopædia Britannica, Inc.



# Ribosomes

## **What Are Ribosomes-**

Dot like figures in the ER

## **Where Are They Found-**

Ribosomes are found in the cytoplasm of both prokaryotic and eukaryote.

## **What Do They Do-**

The ribosomes are the organelles which manufacture proteins.

# Ribosomes Analogy

## Circus-

Ribosomes are the people attending the circus. In a circus people walk through the aisles to get to their seats or go to the restrooms.



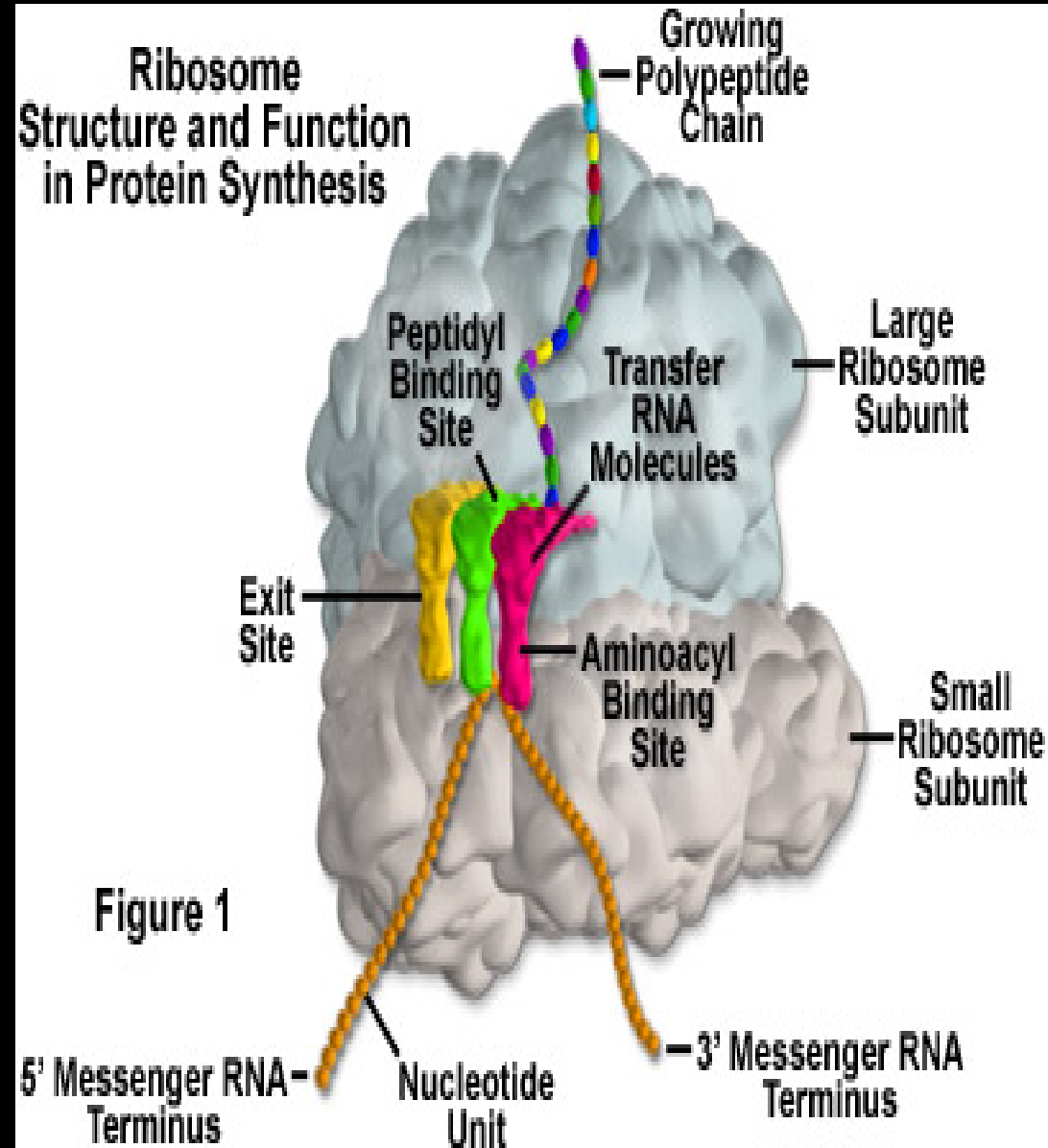
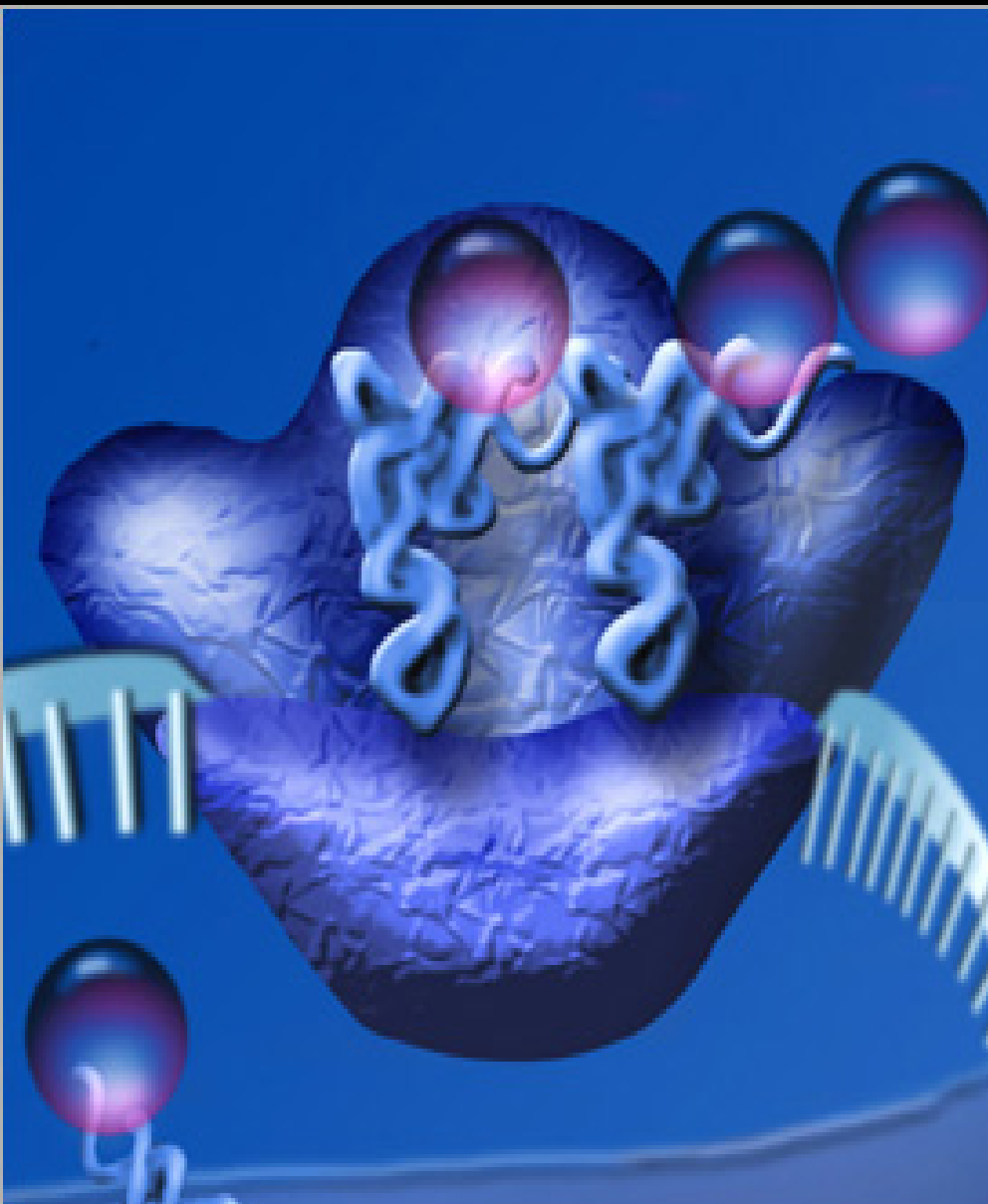
# Ribosomes Analogy-

Mall-

Ribosomes would be people or shoppers. The shoppers travel around and go all over the mall. They browse different stores and floors.



# Ribosomes



# Golgi Body

**What is the Golgi body**  
membrane-bound structure with a single  
membrane.

**Where are they found**  
in most eukaryotic cells.

**What do they do-**  
responsible for packaging proteins



# Golgi Body

## Analogy-

Golgi bodies are the rings in the circus that keep the animals contained for their act. In a cell the Golgi apparatus stores lysosomes .

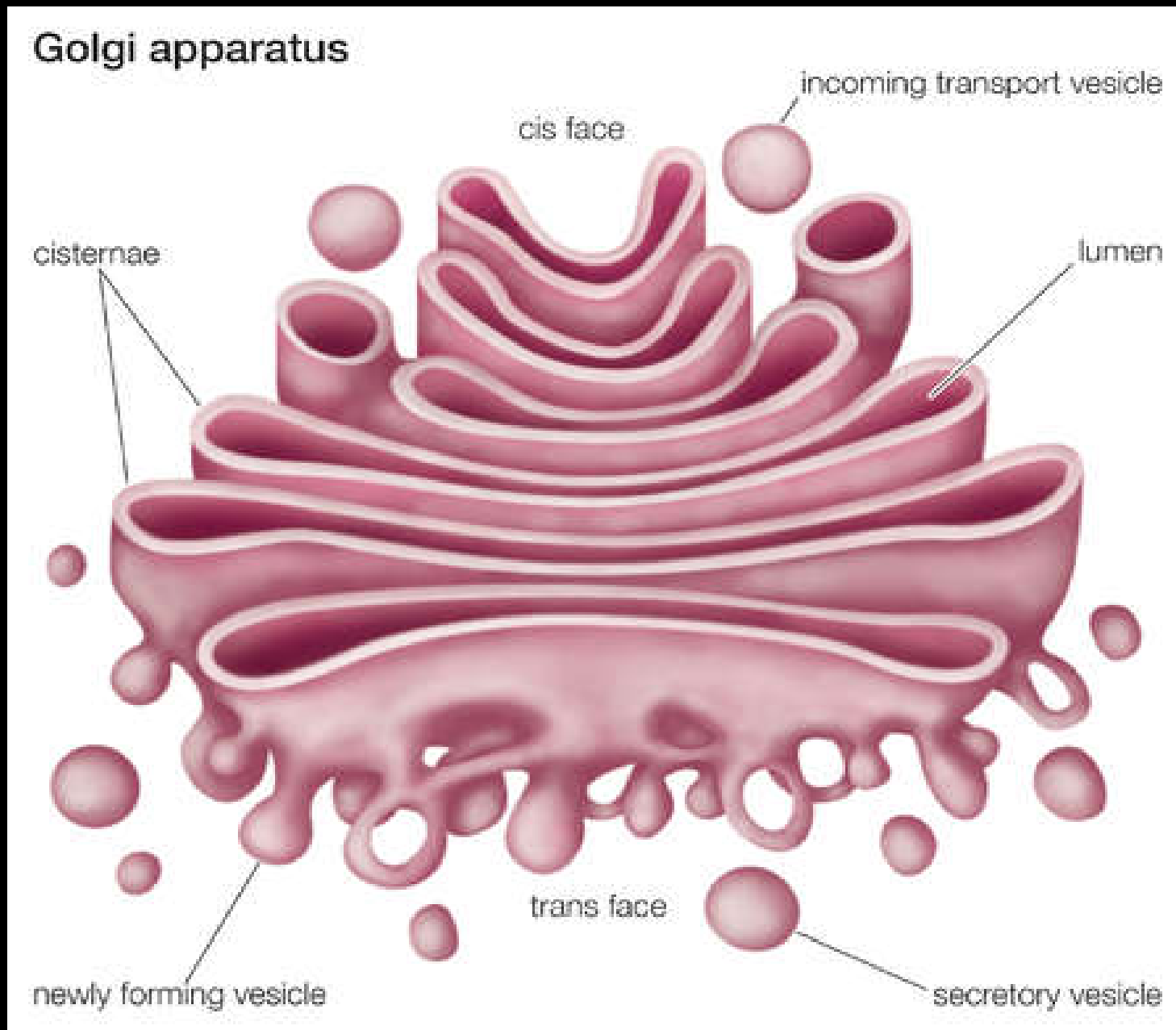


# Golgi Body Analogy



Would be the storage department, delivers, or shippers in the mail package products and ship them off to other stores.

# Golgi Body



# Mitochondria

## **What is the Mitochondria**

The mitochondria is the powerhouse of the cell.

## **Where are they found**

The mitochondria is found in the cytoplasm of every eukaryote cell.

## **What do they do**

The mitochondria supplies energy for the cells.

# Mitochondria

## Analogy

### Circus-

Mitochondria would play the role of a clown. Clowns keep the energy going in the circus.





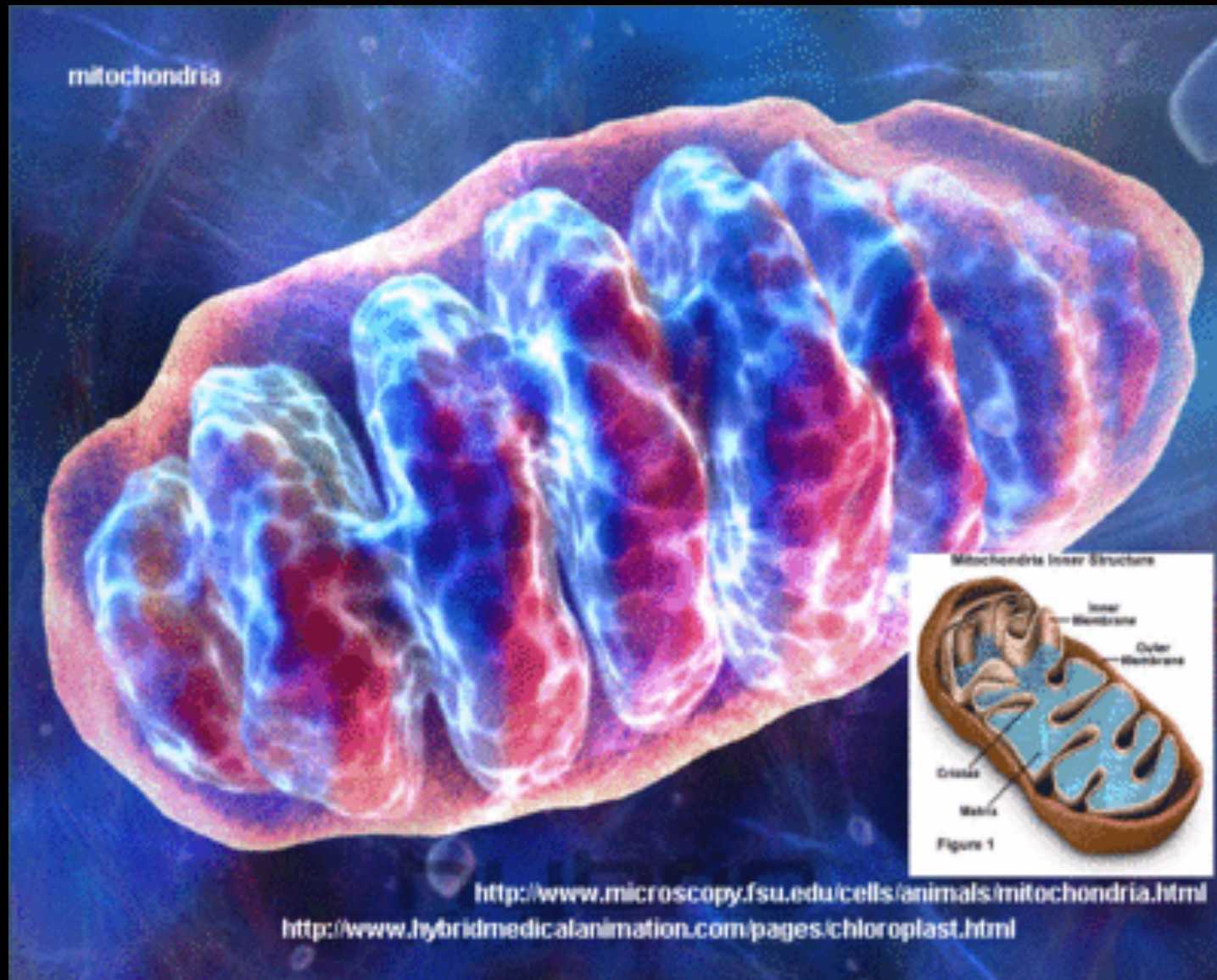
# Mitochondria

## Mall Analogy-

Mitochondria would be the food court. It is the place where people can refill themselves with food and get energy



# Mitochondria



# **Vacuoles**

**What are the vacuoles-**

Vacuole is a membrane-bound sac.

**Where are they found-**

They are found in both plant and animal cells.

**What do they do-**

store food or any variety of nutrients; also waste products.



# Vacuoles



**Analogy-**Vacuoles would be the cages in the circus. Cages store animals, animal food, and animal waste.

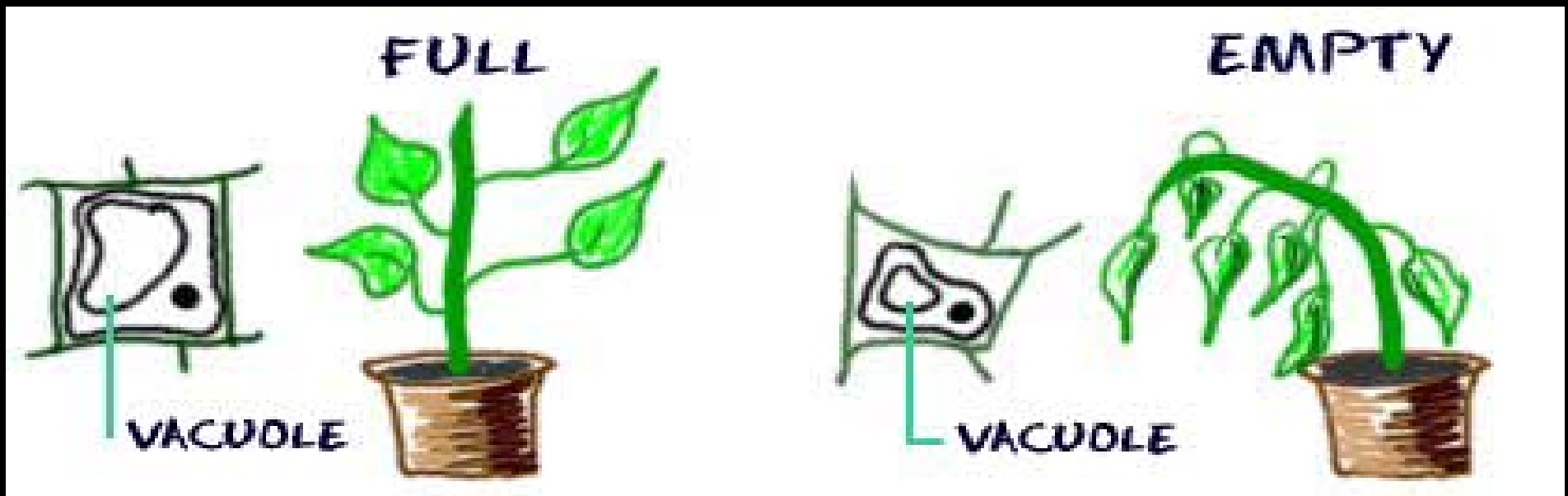
# Vacuoles



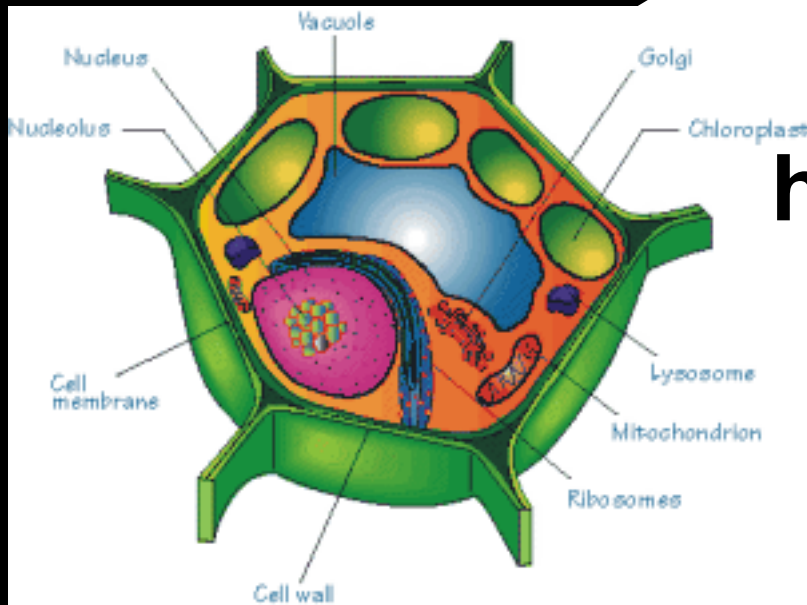
**Analogy-**  
Vacuoles would be  
the refrigerators in  
the food court.



# Vacuoles



**This is what happens  
when plants do not  
have their daily dose of  
vacuole!**



# Lysosomes

**What are the lysosomes-**

Called suicide sacks. Produced by the golgi body; consist of a single membrane.

**Where are they found-**

Mostly in animal cells and rarely in plant cells.

**What do they do-**

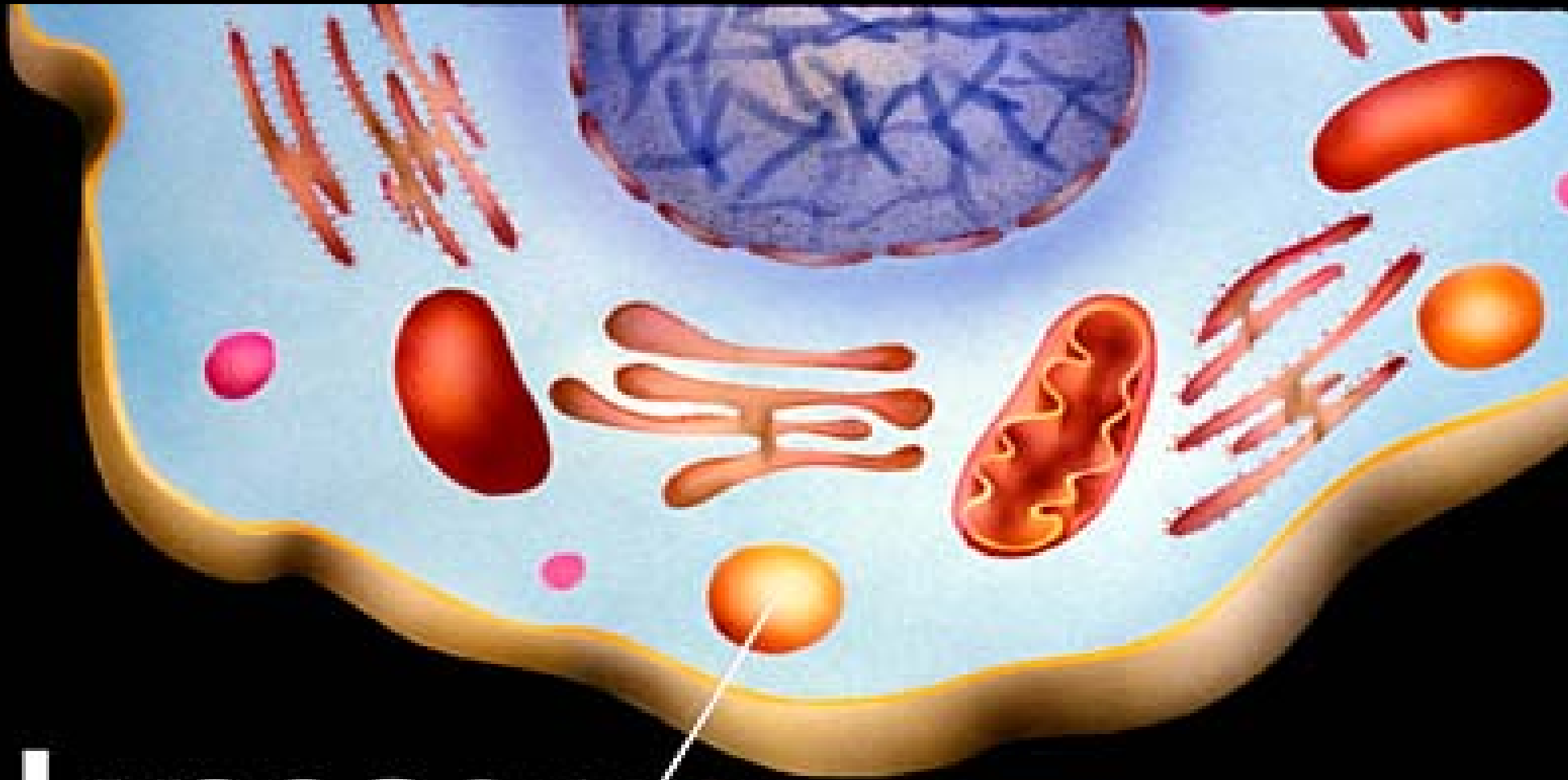
break down and remove old worn out cell parts

# Lysosomes Analogy

Lysosomes would be the security guards. They protect the mall, the people, and take care of shop lifters (bacteria).



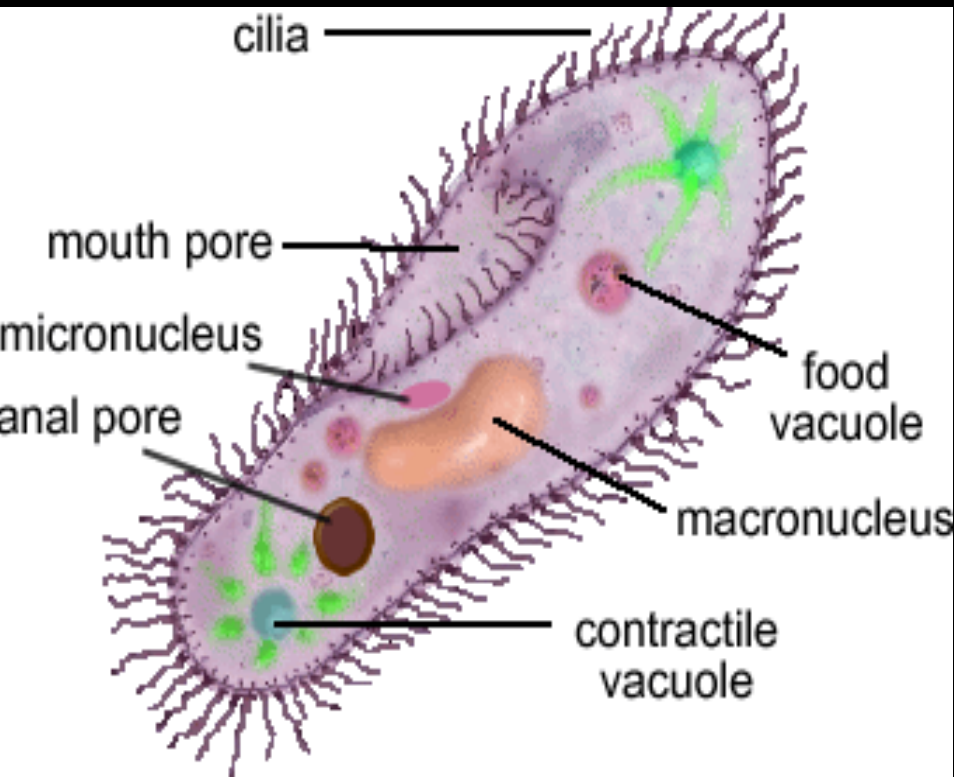
# The Lysosome



**Lysosome**



# Cilia and Flagella



Cilia and flagella both help organisms move; the only difference is flagella has a tail.

# Prokaryotic and Eukaryotic Cells

## **Prokaryotic cells-**

are bacteria, lack a membrane-bound nucleus, ribosomes their only type of organelle, always single-celled, except when they exist in colonies.

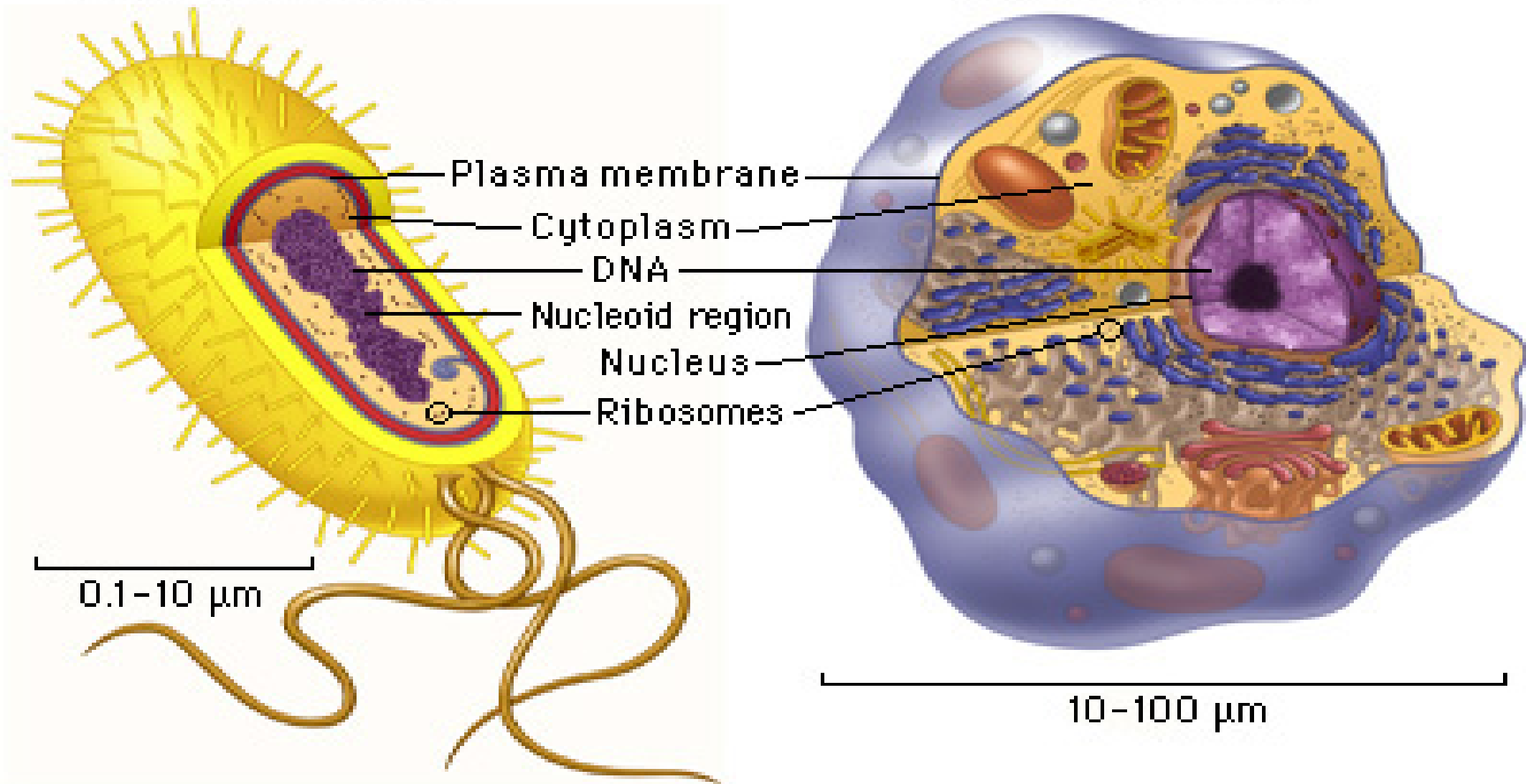
## **Eukaryotic cells-**

are mostly plant, fungi, and animal cells, have membrane-bound nucleus, contain organelles like mitochondria and chloroplasts, can reproduce by meiosis (sexual reproduction) and mitosis (cell division producing identical daughter cells).

# Continued...

Prokaryotic cell

Eukaryotic cell



# Compare & Contrast

Chloroplast are mitochondria are both energy suppliers. The difference is chloroplast gives the pigment of a plant and uses photosynthesis, while mitochondria does not.



# Conclusion

**Cells need all their parts to function properly. Every organelle is important Just like a circus needs their ringmaster and a mall needs it's power room. Without them, they are just useless.**

