

THE CELLULAR ORGANELLULAR LIMERICKAL RAP

By Dr. Henry

ORGANELLS

Organelles rarely fell to organize every cell.
Cells organize into organs very well.
Organs make up systems that become us organisms.
In organisms like you and me, organelles are the key.
All our chemical reactions, without thought or distractions
occur inside our cells' organelles.

CYTOSKELETON

The cellular cytoskeleton is like its name.
It gives the cell some structure, like a frame.
Now its basic elements,
Microtubules & microfilaments
Are similar, but are not quite the same.

VESICLES

(LYSOSOMES)

Lysosomes are the stomachs of the cell.
They digest amino acids very well.
If their digestive enzymes leak,
things would soon be very bleak.
Oxygen deprivation's a death knell.
Endocytosis brings some stuff inside.
Like triglycerides & polypeptides.
Lysozymes help break them down,
then the cell turns right around,
to synthesize whatever it decides.

(PEROXISOMES)

Peroxisomes have catalase inside,
to stop harmful hydrogen peroxide.
And that is what is meant
by an anti-oxidant.
So cellular degeneration is denied.

(VACUOLES)

Like other 'somes', animal vacuoles are small.
Some don't contain anything at all.
Water hydrolysers, and stored food appetizers,
are utilized when a cell makes a call.
What cells don't store and eat,
their vacuoles secrete.

RER & SER

Endoplasmic reticuli come in twos.
The one without the *ribosomes* is smooth.
The other has the stuff,
And so they call it *rough*.
Protein synthesis is what they're meant to do.
The rough one is for protein modification
where reactions like protein transformation
are needed at all times,
so they change into enzymes
for the entire organism's regulation.
the *smooth ER* is just for this:
lipid & carbohydrate synthesis.

NUCLEUS & NUCLEOLUS

A *eukaryote* nucleus has an envelope membrane surrounding chromosomes of *DNA*.
And there's this other thing, a nucleolus by name that produces ribosomal *RNA*.
Chromosomes are for cellular regulation.
Ribosomes help in protein replication.

GOLGI BODY

The Golgi apparatus packages things,
like enzymes & other kinds of proteins.
Here *vesicles* are needed,
so stuff can be secreted
by *Exocytosis* via cellular membranes.

MITOCHONDRIA

The mitochondria is the cellular power source.
So proteins and things will run their course.
The membrane is double walled
so a process that is called
the *Krebs cycle* can make energy
that is stored as *ATP*.