



## Smooth Endoplasmic Reticulum is “The Synthesizer”

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View photos of Smooth Endoplasmic Reticulum (9)

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Poke Smooth Endoplasmic Reticulum

### Information

[Networks:](#)

Prokaryote and Eukaryote

[HOME MOVIES:](#)

Endoplasmic Reticulum

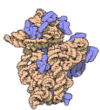
[Hometown:](#)

Cytoplasm, In-between Rough ER and Golgi Complex

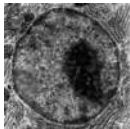
### Friends



Golgi Complex



Ribosome



Nucleus



Rough ER



Phospholipid



ER Membrane



Smooth Endoplasmic Reticulum is preparing to transport glycoproteins!

September 24, 2011



Smooth Endoplasmic Reticulum is currently regulating the calcium concentration!

September 21, 2011



Endoplasmic Reticulum Membrane Thanks!

September 20, 2011



Smooth Endoplasmic Reticulum to Endoplasmic Reticulum Membrane your welcome for inserting integral membrane proteins as they were being synthesized.

September 20, 2011



Smooth Endoplasmic Reticulum is synthesizing lipids, carbohydrates, and steroids!

September 20, 2011



Smooth Endoplasmic Reticulum is increasing surface area for the action or storage of key enzymes.

September 20, 2011



Smooth Endoplasmic Reticulum is converting glucose-6-phosphate into glucose!

September 18, 2011



Smooth Endoplasmic Reticulum Being in charge of detoxification of drugs keeps me busy!

September 17, 2011



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### Basic Information

**Networks:** Prokaryote and Eukaryote  
**Sex:** Asexual: Mitosis Sexual: Mitosis

**Made of:** Phospholipid bilayers

**Hometown:** Cytoplasm, In-between Rough ER and Golgi Complex  
**Relationship Status:** Married with Rough Endoplasmic Reticulum

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### Information

**Networks:** Prokaryote and Eukaryote  
**Birthday:** September 2<sup>nd</sup>, 2011  
**HOME MOVIES:** Endoplasmic Reticulum  
**Hometown:** Cytoplasm, In-between Rough ER and Golgi Complex  
**Phone Number** 1-800 -SYNTHZR

### Photos

4 Albums



#### The Family

Updated last Tuesday



#### Me and the Nucleus

Updated two months ago

### Personal Information

**Activities:** Synthesis of lipids and steroids, Metabolism of carbohydrates, Regulation of calcium concentration, Drug detoxification, Attachment of receptors on cell membrane proteins, and Steroid metabolism

**Interests:** Synthesizing, Metabolizing, Detoxifying, and Regulating

**Favorite Music:** Anything but country music!

**Favorite Movies:** Anchorman ,Scary Movie 4

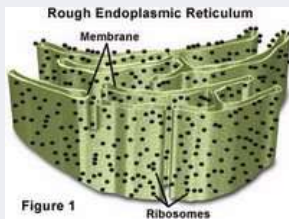
**Favorite TV Shows:** Late Show with David Letterman, Wipe Out!, Pawn Stars

**Favorite Books:** Ender's Game by Orson Scott Card, The Hunger Games, Catching Fire, and Mocking Jay by Suzanne Collins

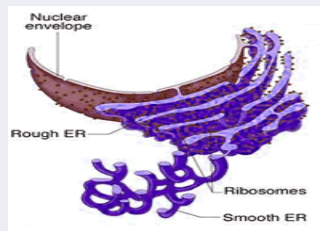
## Smooth Endoplasmic Reticulum is "The Synthesizer"

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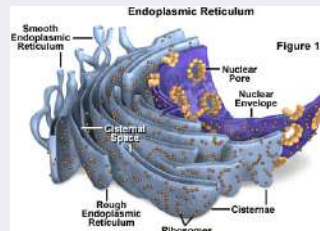
### THE FAMILY 4 Photos



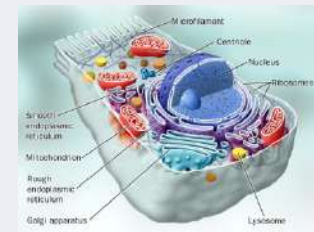
Rough Endoplasmic Reticulum



Rough ER and Smooth ER

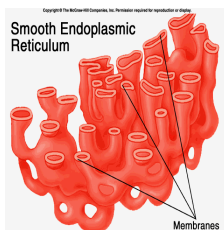


Endoplasmic Reticulum and the Nucleus

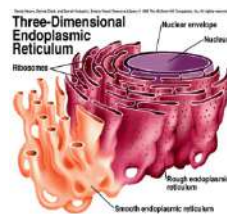


The Whole Family

### Made of (4)Photo Albums



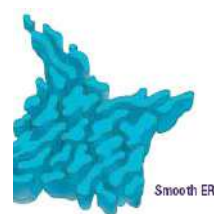
The Family  
4 photos



Me and the Nucleus  
5 photos



Profile Pictures  
1 photo



Photos of Me  
9 photos

# WHAT YOU SHOULD KNOW ABOUT ME

## MADE OF:

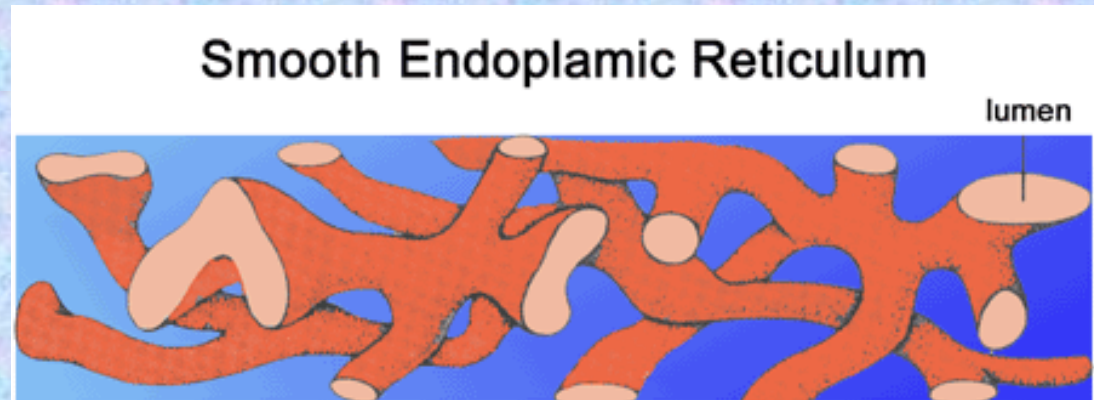
- Phospholipid Bilayers
  - Phosphates
  - Lipids

## FUNCTION:

- Synthesizes lipids and steroids
- Metabolizes carbohydrates (converts glucose-6-phosphate into glucose)
- Regulates calcium ions
- Drug detoxification
- Steroid metabolism
- Used as a surface area for the action of enzymes
- Stores enzymes
- Pack proteins for transportation
- Stores calcium to be used in muscles

## MISCELLANEOUS:

- The Smooth Endoplasmic Reticulum is called smooth because it lacks the ribosomes that make the Rough ER look Rough
- Large concentration of Smooth ER in liver cells in order to detoxify drugs and another large concentration in muscles
- The Smooth Endoplasmic Reticulum has different functions in different cells (Ex: In a liver cell the Smooth ER detoxifies, in a muscle cell the Smooth ER stores calcium that is released when muscles contract)
- The Smooth ER is connected to the Rough ER and is by the Nuclear Membrane
- Smooth ER is found both in Animal and Plant cells



## RESOURCES USED:

### Information

<http://micro.magnet.fsu.edu/cells/endoplasmicreticulum/endoplasmicreticulum.html>  
[http://en.wikipedia.org/wiki/Endoplasmic\\_reticulum](http://en.wikipedia.org/wiki/Endoplasmic_reticulum)  
<http://www.etap.org/demo/biology1/instruction5tutor.html>  
<http://courses.washington.edu/conj/membrane/bilayer.htm>  
<http://academic.brooklyn.cuny.edu/biology/bio4fv/page/phosphb.htm>  
<http://www.buzzle.com/articles/smooth-endoplasmic-reticulum.html>  
<http://www.cytochemistry.net/cell-biology/rer1.htm>

### Images

[http://upload.wikimedia.org/wikipedia/commons/5/57/Micrograph\\_of\\_a\\_cell\\_nucleus.png](http://upload.wikimedia.org/wikipedia/commons/5/57/Micrograph_of_a_cell_nucleus.png)  
<http://micro.magnet.fsu.edu/cells/endoplasmicreticulum/endoplasmicreticulum.html>  
<http://biology.about.com/od/cellanatomy/ss/endoplasmic-reticulum.htm>  
<http://www.biologycorner.com/resources/er.gi>  
<http://bioweb.wku.edu/courses/biol115/wyatt/biochem/lipid/P-lipid.giff>  
[http://envorganelles.wikispaces.com/file/view/cell\\_structure.jpg/190694936/cell\\_structure.jpg](http://envorganelles.wikispaces.com/file/view/cell_structure.jpg/190694936/cell_structure.jpg)  
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[http://wiki.faithlutheranlv.org/groups/carmanbio/wiki/7dcff/Endoplasmic\\_Reticulum\\_rough\\_smooth.html](http://wiki.faithlutheranlv.org/groups/carmanbio/wiki/7dcff/Endoplasmic_Reticulum_rough_smooth.html)