

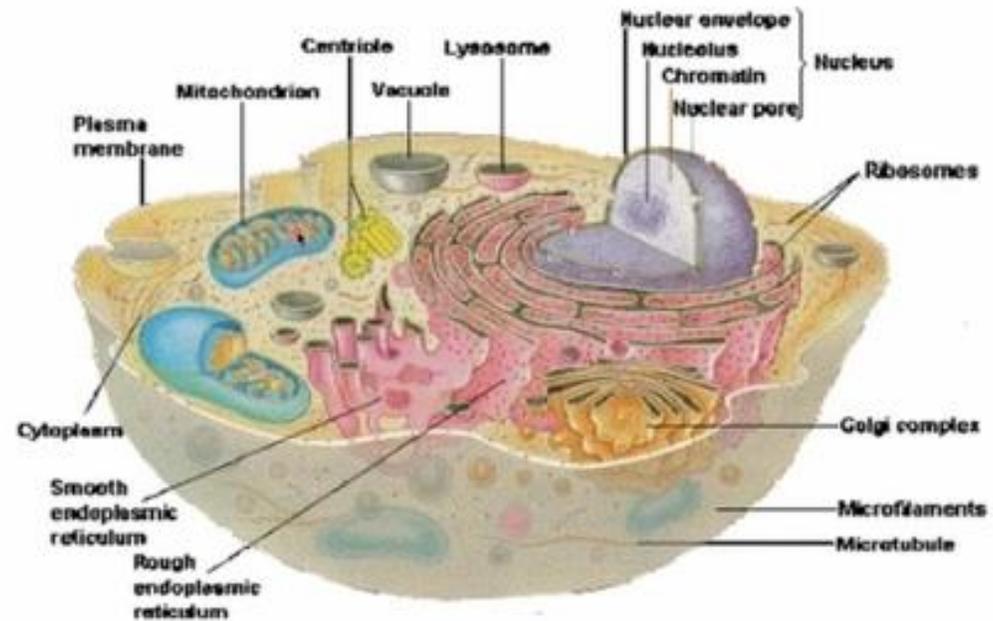
# CELL MEMBRANE DETOX

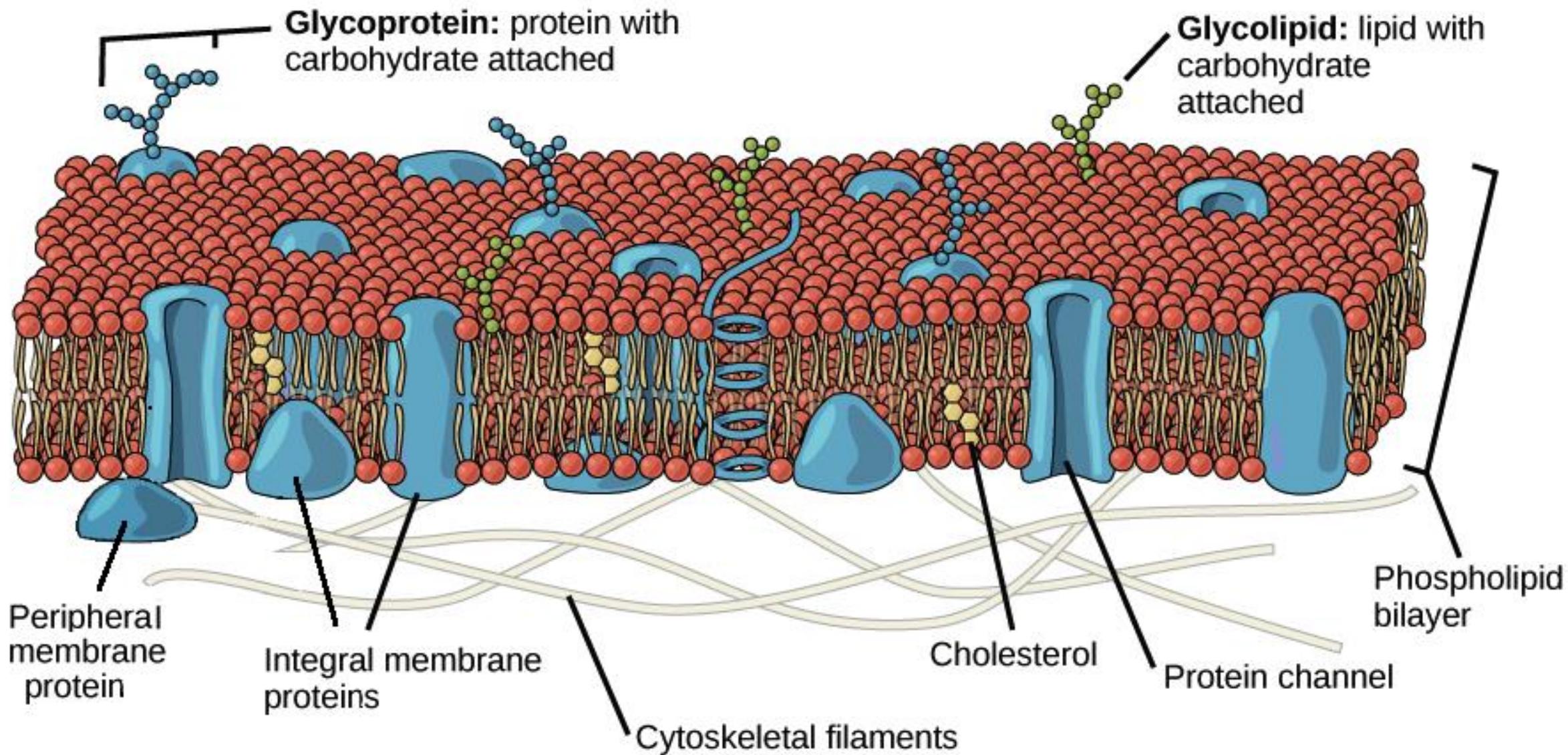


Let's bring common  
sense back to health.

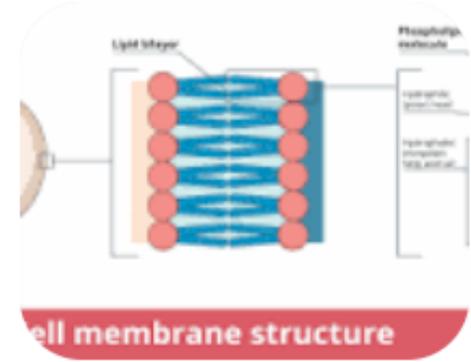
# Membranous Organelles

1. Endoplasmic Reticulum
2. Mitochondria
3. Golgi Apparatus
4. Lysosomes and Peroxisomes
5. Nucleus



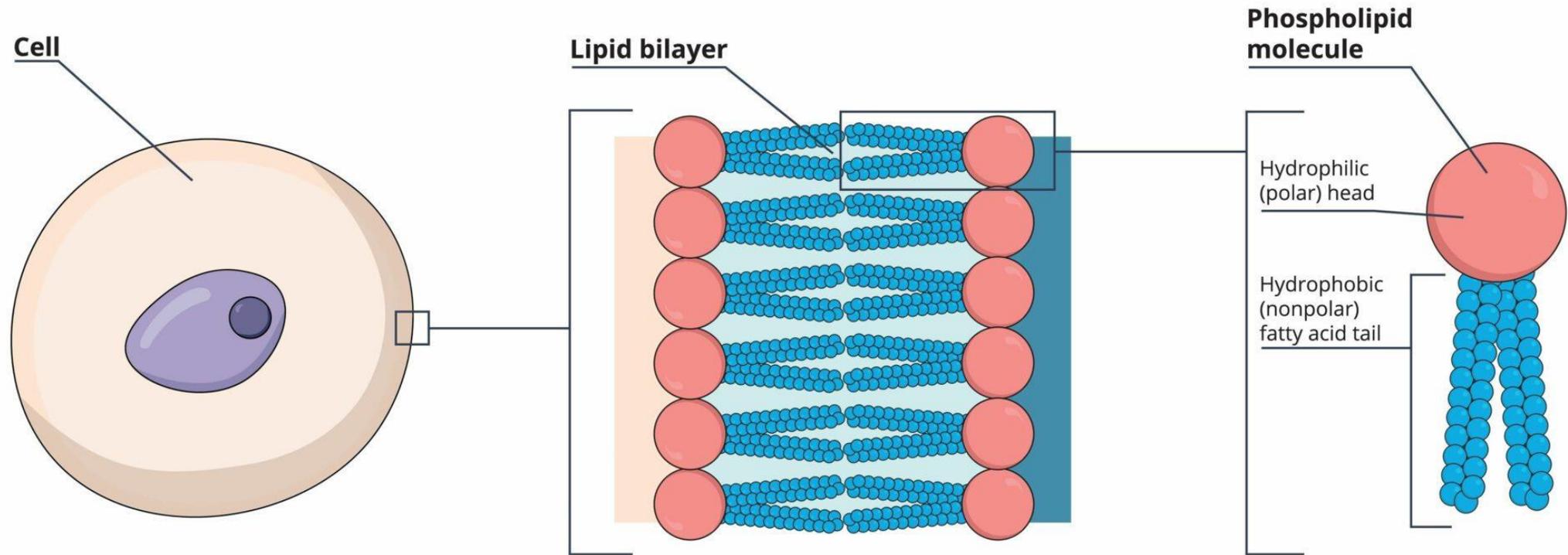


Phosphatidylcholine (PC) is a crucial component of cell membranes, acting as a major building block and contributing to membrane fluidity and function. It's the most abundant phospholipid in mammalian cells, making up roughly 40-60% of total phospholipids, [according to ScienceDirect.com](#) and [PubChem](#). Beyond its structural role, PC also participates in cell signaling and lipid metabolism. 



.. . . . .

[https://www.google.com/search?sca\\_esv=b0b02ac746e93036&rlz=1C5CHFA\\_enUS1118US1118&sxsrf=AE3TifNeFmyFh6Ewo\\_WG8wW7gEUuTpKiFQ:1Z51313759136&q=Phosphatidylcholine+In+the+cell+membrane&source=lnms&fbs=AlljpHyTFN8BbSyNXQ3oA-fn7H5N0\\_aFIIVM3Dsmdj\\_aHzoLxwxLLLCfPz](https://www.google.com/search?sca_esv=b0b02ac746e93036&rlz=1C5CHFA_enUS1118US1118&sxsrf=AE3TifNeFmyFh6Ewo_WG8wW7gEUuTpKiFQ:1Z51313759136&q=Phosphatidylcholine+In+the+cell+membrane&source=lnms&fbs=AlljpHyTFN8BbSyNXQ3oA-fn7H5N0_aFIIVM3Dsmdj_aHzoLxwxLLLCfPz)



# Cell membrane structure

<https://vivewell.health/services/phosphatidylcholine-therapy/>



## Membrane Mend®

# Supplement Facts

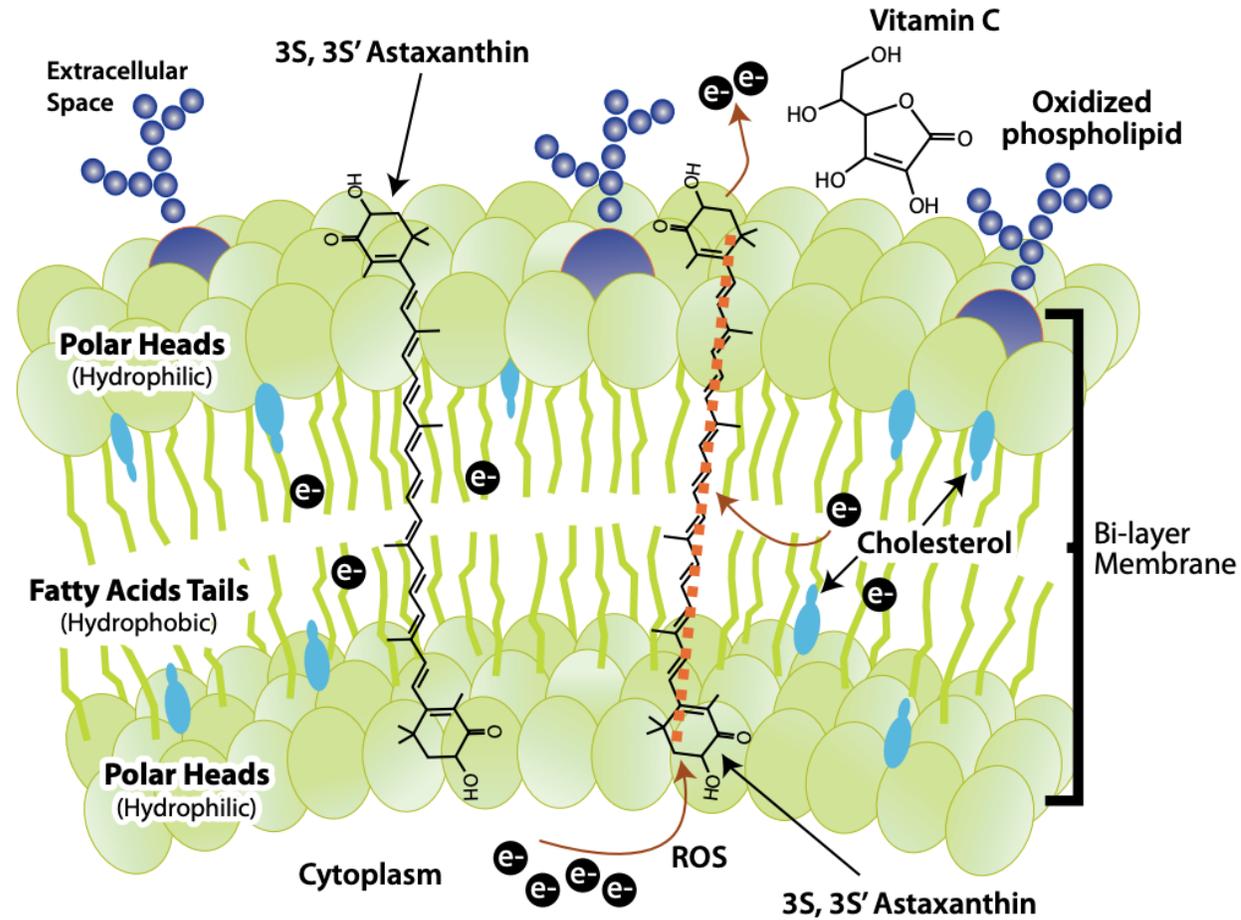
Serving Size: 5 mL (1 tsp.)  
Servings Per Container: 20

	Amount Per Serving	% Daily Value
Natural Astaxanthin (from Haematococcus pluvialis extract)	7mg	**
DeltaGold® Tocotrienols	10mg	**
Ahiflower® (refined Buglossoides arvensis) seed oil	150mg	**
Phosphatidylcholine (from highly purified phospholipids)	460mg	**

**\*\*Daily Value not established**

**Other Ingredients:** Water, glycerin, ethanol, tocopherols, natural citrus oils, antioxidants (rosemary extract, natural tocopherols, ascorbyl palmitate)

Figure 2. Transverse Cell Membrane Orientation of 3S,3S' Astaxanthin, the Major Molecular Form from *H. pluvialis*<sup>10</sup>



The polar end groups overlap the polar boundary zones of the membrane, while the nonpolar middle fits the membrane's nonpolar interior. The dashed red line speculatively indicates "lightning-rod" conduction of electrons along the astaxanthin molecule, possibly to vitamin C or other antioxidants located outside the membrane.

From: Pashkow FJ, Watumull DG, Campbell CL. Astaxanthin: a novel potential treatment for oxidative stress and inflammation in cardiovascular disease. *Am J Cardiol* 2008;101(suppl):58D-68D. Used with permission.



QUICKSILVER  
SCIENTIFIC®

MICELLIZED



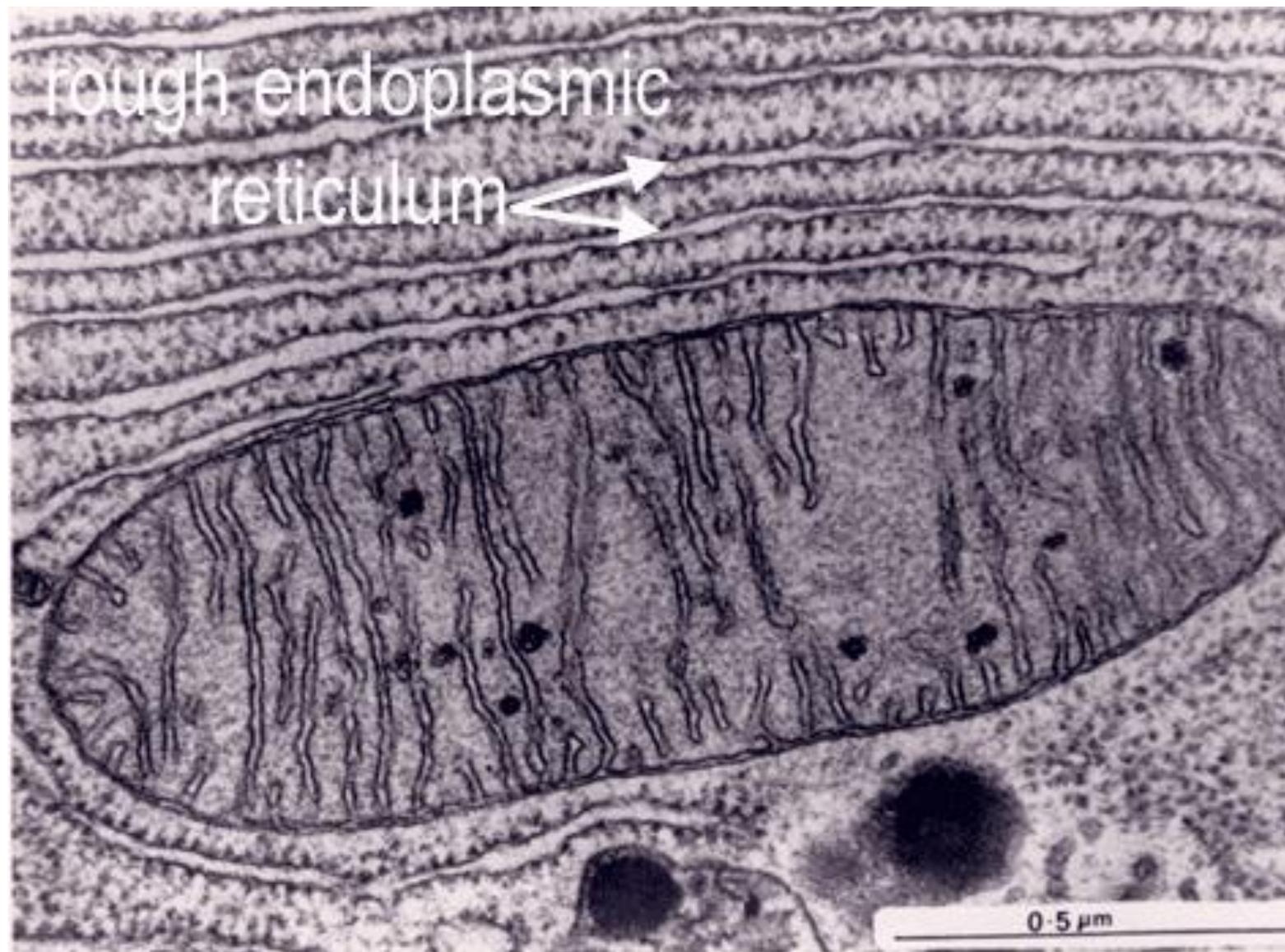
PURE PC®

CELL MEMBRANE  
FORTIFIER\*

HIGHLY BIOAVAILABLE

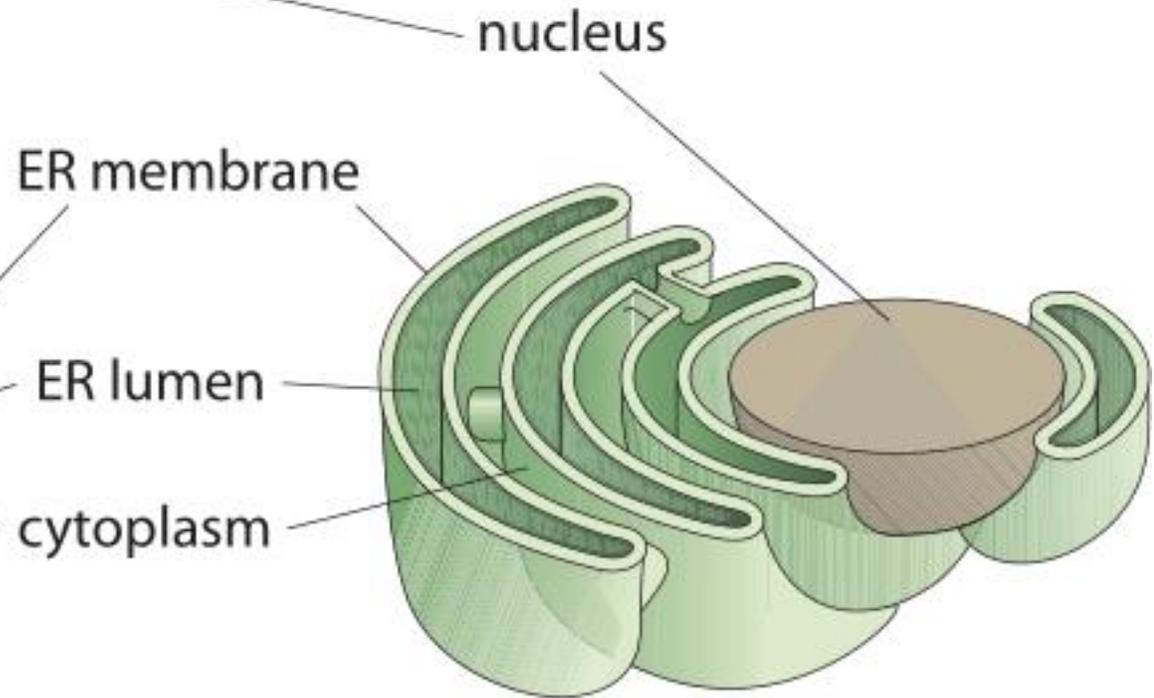
Dietary  
Supplement

4 FL. OZ (120mL)





1  $\mu\text{m}$

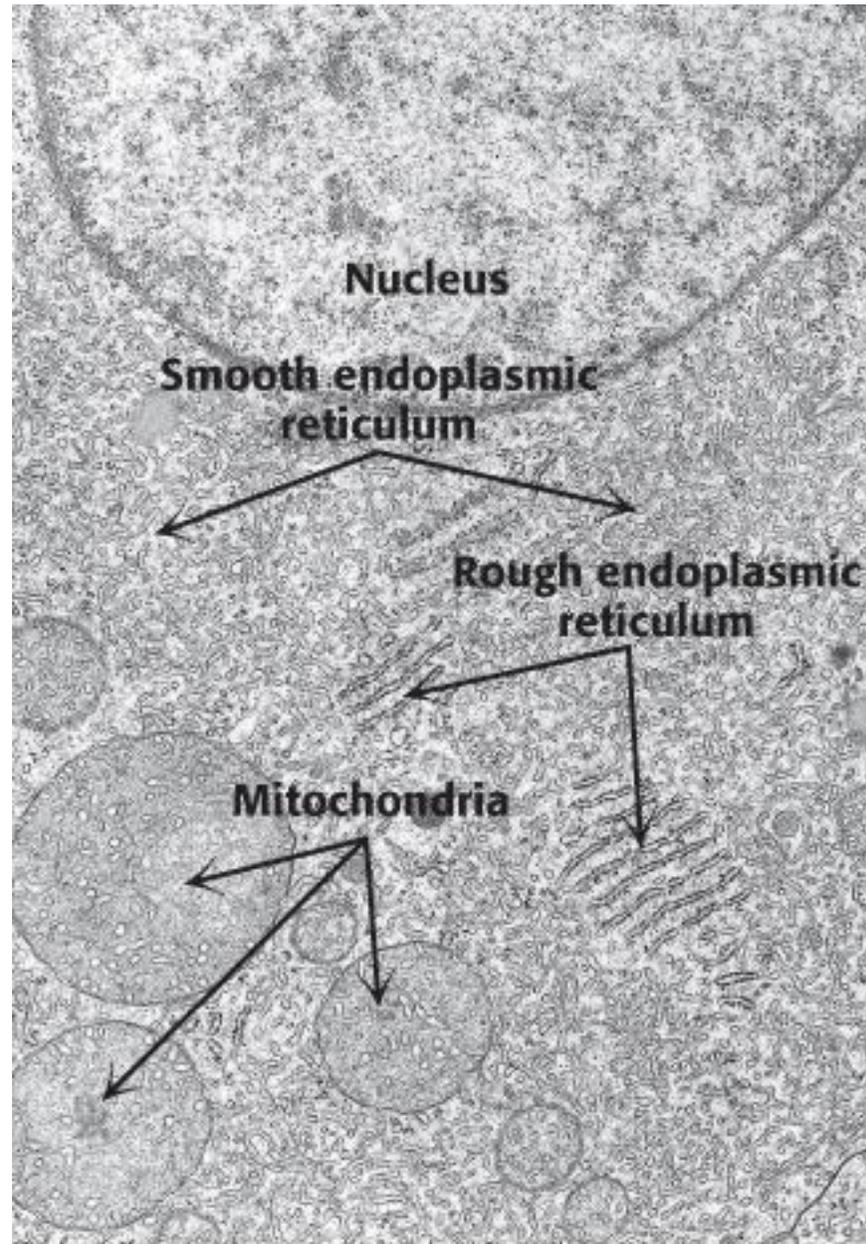


nucleus

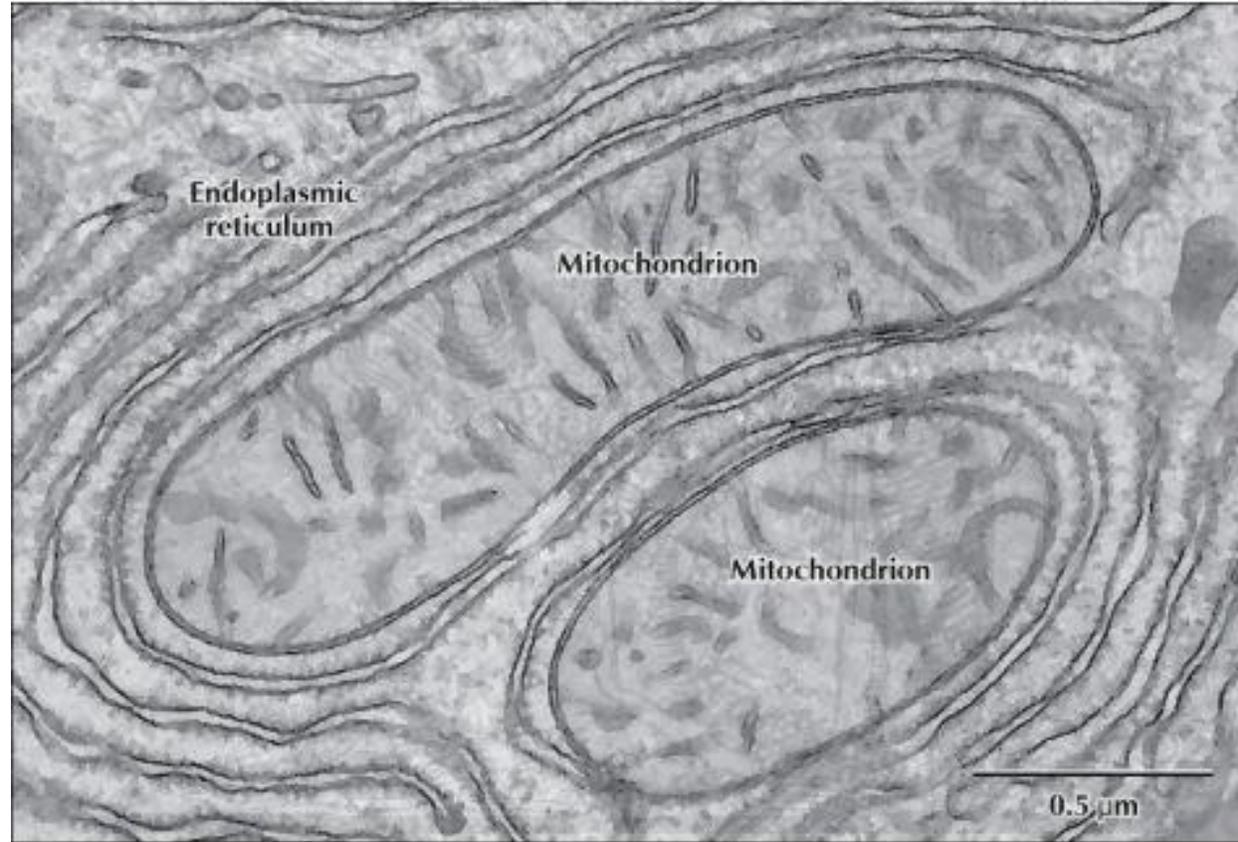
ER membrane

ER lumen

cytoplasm

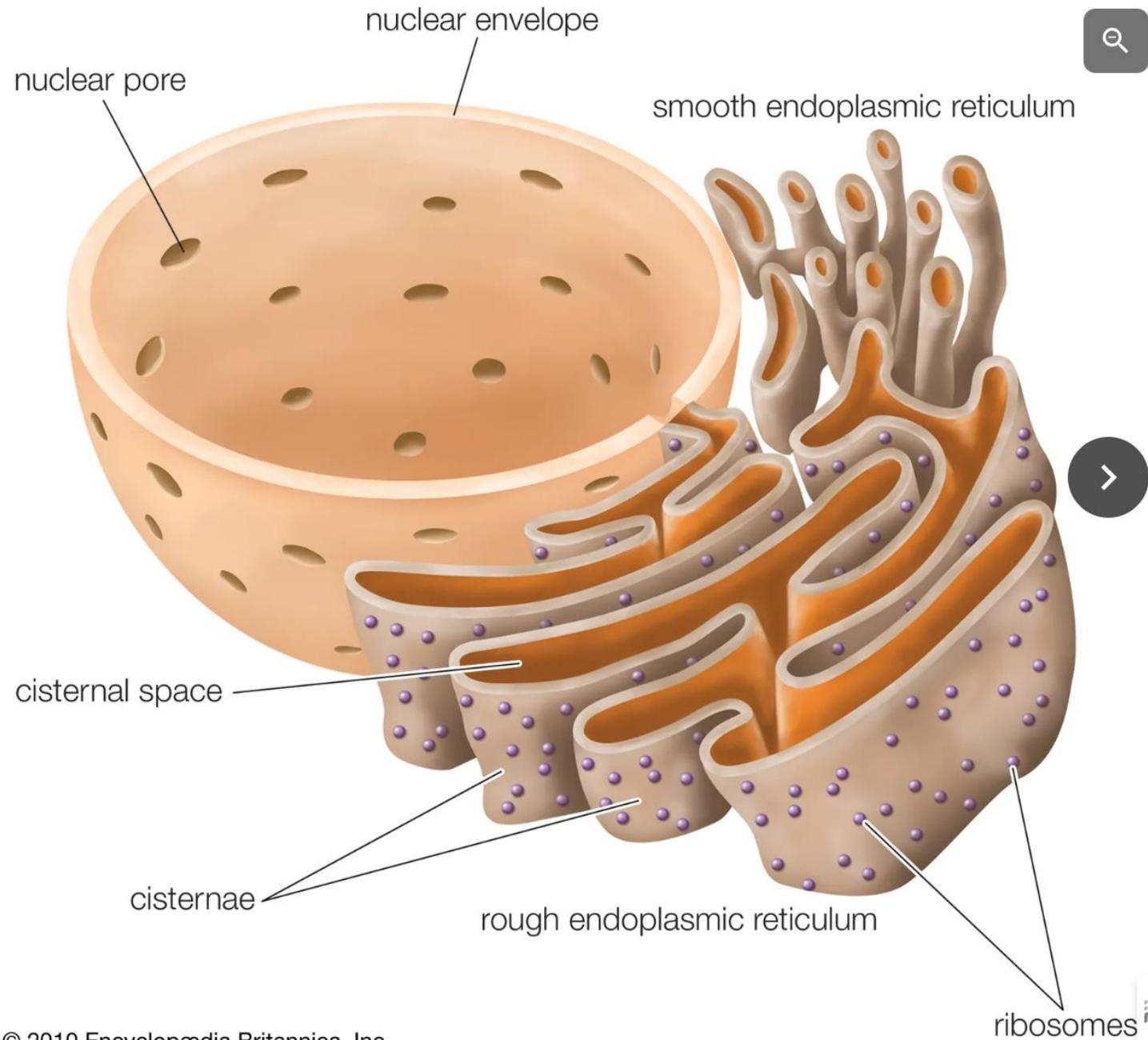


Don W. Fawcett/Science Source



ELSEVIER

# Endoplasmic reticulum



Ribosomes are essential cellular structures responsible for protein synthesis. They are found in all living cells, including bacteria, archaea, and eukaryotes. Ribosomes act as molecular machines that translate messenger RNA (mRNA) into proteins by linking amino acids together in a specific order

**PRETOX**



## A Gentle 'Push-Catch'

Optional Starting Point For Sensitive Patients



**BITTER X FOR  
BILE FLOW**



**KIDNEY SUPPORT  
AND DRAINAGE**



**PC TO MOVE TOXINS AND  
NOURISH CELLS**



**FREE RADICAL  
QUENCHER**

# ULTRA BINDER

## A Universal Toxin Binder Blend



*Ingredients with specificity for a variety of toxic agents – mops up die off*



Bulk Powder



Individual Dose Sachets

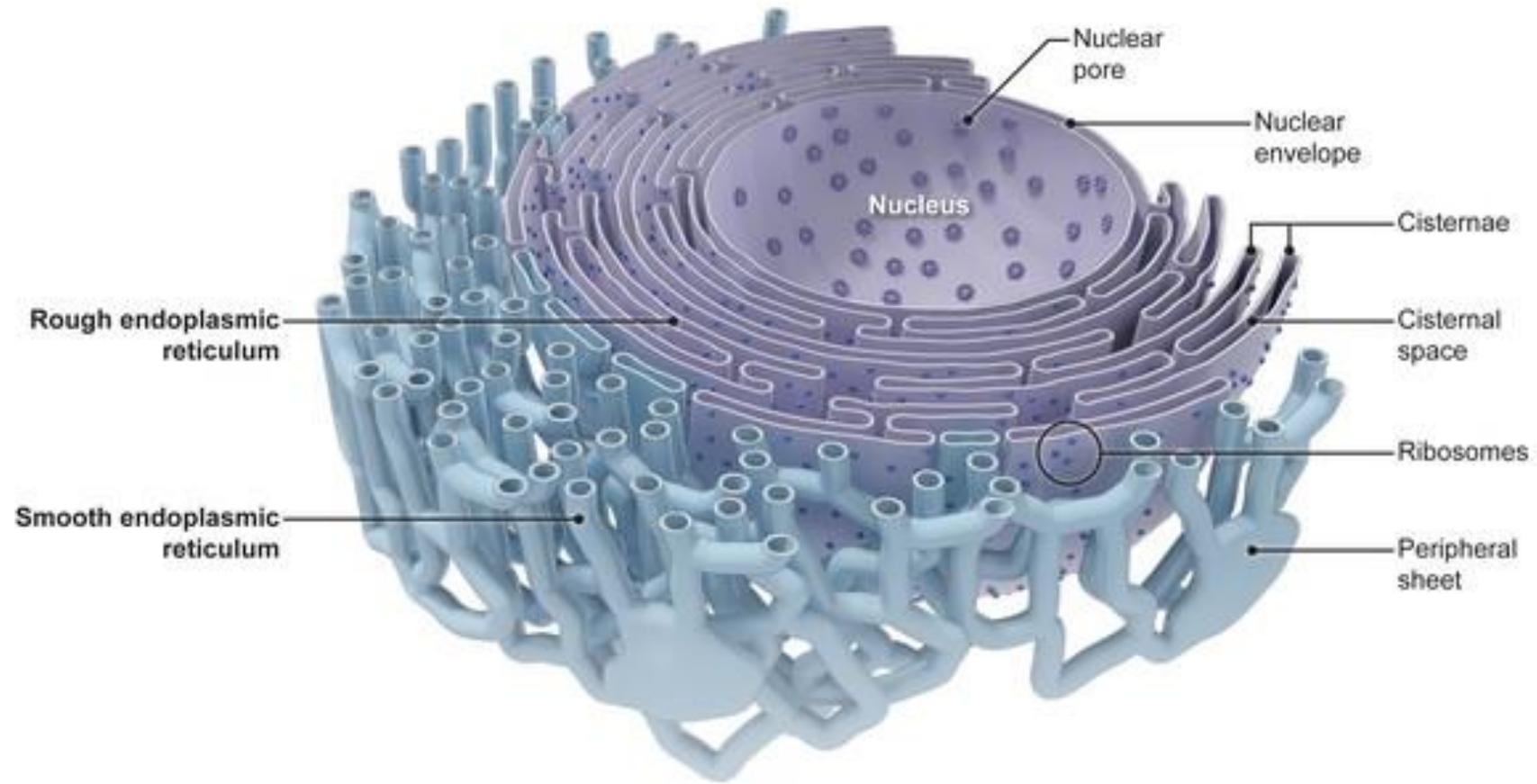


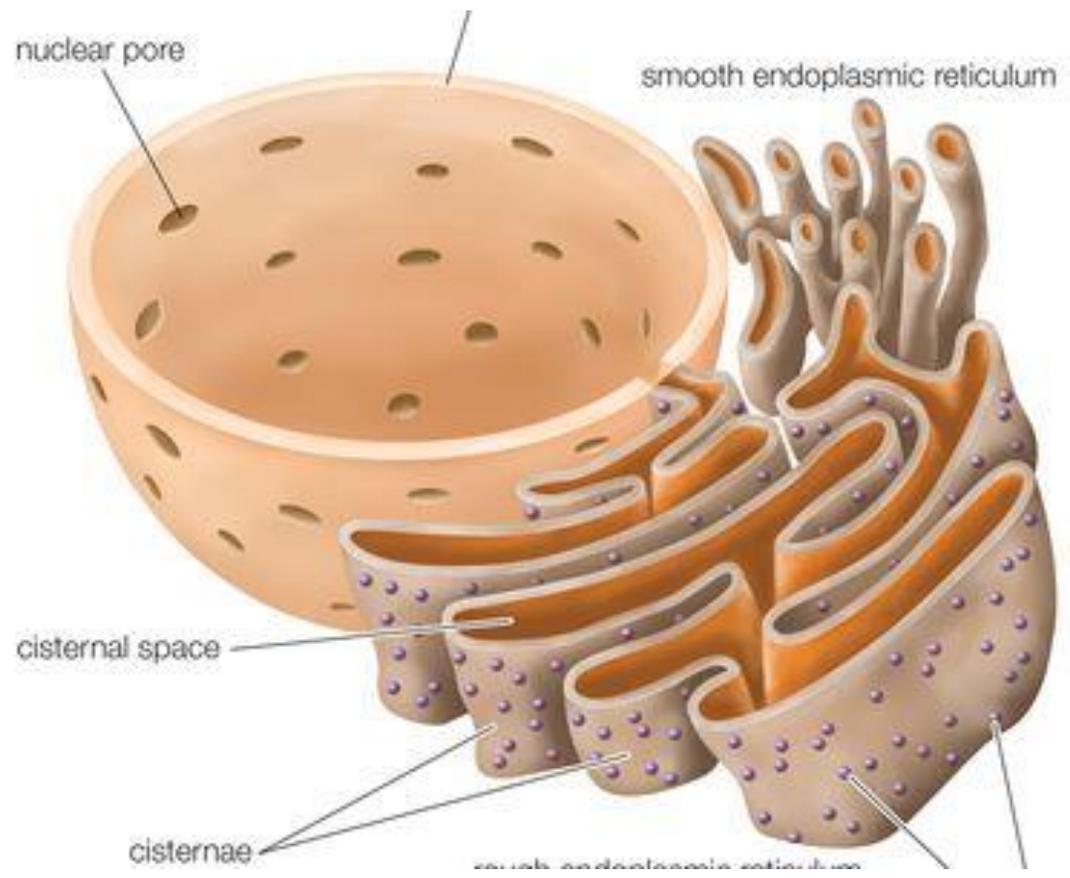
Capsules

### INGREDIENTS

- Activated Charcoal
- Bentonite Clay
- IMD
- Zeolite
- Chitosan
- Aloe
- Acacia
- Modified Citrus Pectin (Capsules only)





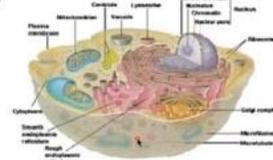


# Endoplasmic Reticulum (ER) as Quarterback

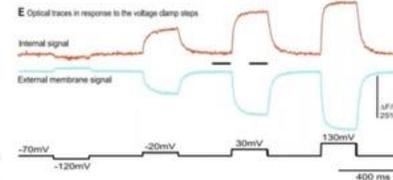
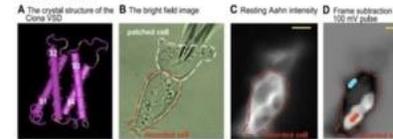
## Monitoring voltage fluctuations of intracellular membranes

Masoud Sepehri Rad<sup>1</sup>, Lawrence B. Cohen<sup>1,2</sup>, Oliver Braubach<sup>3</sup> & Bradley J. Baker<sup>1,3</sup>

In eukaryotic cells, the endoplasmic reticulum (ER) is the largest continuous membrane-enclosed network which surrounds a single lumen. Using a new genetically encoded voltage indicator (GEVI), we applied the patch clamp technique to cultured HEK293 cells and neurons and found that there is a very fast electrical interaction between the plasma membrane and internal membrane(s). This discovery suggests a novel mechanism for interaction between the external membrane and internal membranes as well as mechanisms for interactions between the various internal membranes. The ER may transfer electrical signals between the plasma membrane and other internal organelles. The internal membrane optical signal is reversed in polarity but has a time course similar to that of the plasma membrane signal. The optical signal of the GEVI in the plasma membrane is consistent from trial to trial. However, the internal signal decreases in size with repeated trials suggesting that the electrical coupling is degrading and/or the resistance of the internal membrane is decaying.



### HEK293 cells



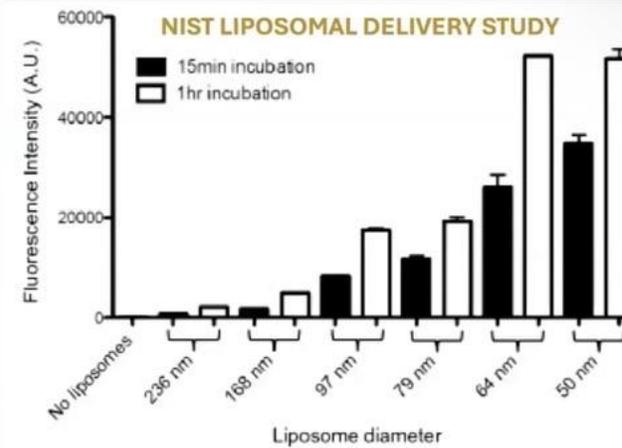
# Quality Manufacturing = High Absorption



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## PHARMACY-ON-A-CHIP: MICROFLUIDIC SYNTHESIS OF PEGYLATED AND FOLATE RECEPTOR-TARGETED LIPOSOMES FOR DRUG DELIVERY

Renee R. Hood<sup>1</sup>, Abhay Andar<sup>2</sup>, Donna M. Omlatek<sup>1</sup>, Wyatt N. Vreeland<sup>1</sup>, Peter W. Swaan<sup>2</sup>, and Don L. DeVoe<sup>2</sup>



# Infection/Viral Support



## INFECTION

## VIRAL



- Cryptolepis

- Artemisinin
- Cryptolepis
- Japanese Knotwood

- Cat's Claw
- Lemongrass
- Olive leaf
- Lemon Balm
- Propolis
- Monolaurin



Ongoing infection depletes EGT & GSH

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# DOSING



## LIPO CRYPTO DOSING

- Start with 1 pump per day then 1 pump 2 x daily, then 2 pumps 2 x daily
- Monitor symptoms.
- Titrate up as needed

2 pumps contains .4mL of cryptolepis extract.  
In this delivery it's roughly 2-4x stronger than standard tincture cryptolepis extract.



## CRYPTO CO-MAX DOSING

If starting slow: ½ tsp BID

Otherwise:

1 tsp 2 x daily

Can titrate up to 2 tsp 2 x daily

- Monitor symptoms.
- Titrate up as needed

# PRODUCT PAIRINGS



**IMMUNE:** Immune Charge 1-2 tsp daily  
Zinc Ionophore 30-50 mg daily

**BIOFILMS:** Liposomal EDTA 1-3 tsp daily or Clearway Cofactors – 3-6 caps daily

**DETOX/EXCRETION:** Kidney Care 1-3 tsp daily  
Liposomal Glutathione 5 pumps daily  
Ultra Binder 1 tsp mixed in water or 4-6 capsules  
Take 30-60 min. liposomal products



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Individual Dose Sachets

Capsules

### INGREDIENTS

- Activated Charcoal
- Bentonite Clay
- IMD
- Zeolite
- Chitosan
- Aloe
- Acacia
- Modified Citrus Pectin (Capsules only)

### **Single membrane-bound organelles:**

**1.Lysosomes** – contain digestive enzymes.

**2.Peroxisomes** – break down fatty acids and detoxify harmful substances.

### **3.Endoplasmic Reticulum (ER)**

**1. Rough ER** – has ribosomes on its surface, helps in protein production.

**2. Smooth ER** – makes lipids and detoxifies chemicals.

**4.Golgi Apparatus** – modifies, packages, and ships proteins and lipids.

**5.Vesicles** – small transport sacs that move materials around the cell.

### **Double membrane-bound organelles:**

**1.Nucleus** – stores DNA; surrounded by a double nuclear envelope.

**2.Mitochondria** – produce energy (ATP); have two membranes: inner and outer.











