

World's First!

# POLYPHENO LIPID

PolyphenOil

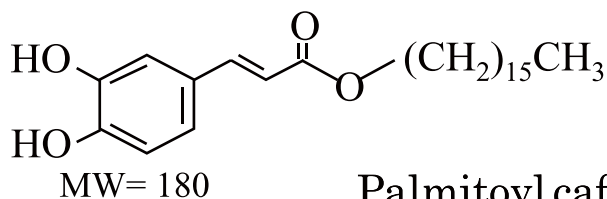
Japanese Craftmanship Creat.  
"New Amazing Antioxidant"

New health material From Japanese Distilled Spirit

Anti-tumor  
Anti-oxidant  
Anti-viral



Anti-allergic  
Anti-inflammatory  
Anti-Alzheimer



Palmitoyl caffeate (long-chain alkyl ester of caffeic acid)

Polyphenolipid is a dimer of lipid and polyphenol rarely found in nature.  
It is a new anti-aging material which exhibits a high oil solubility.

All cell membranes are made of lipids

Water  
Adult  
60~65%

Total cell number  
37 trillion

of which red blood cells  
24 trillion !



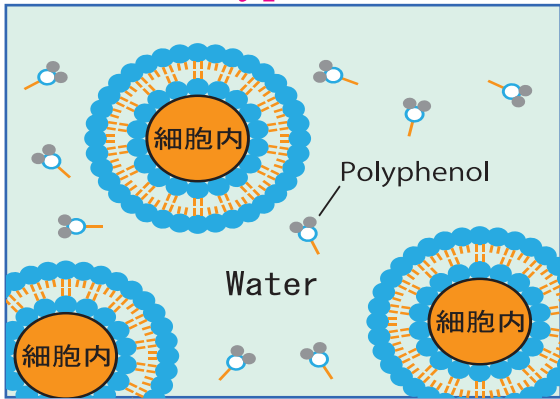
carrying oxygen

- ◆ Oil-soluble antioxidant
- ◆ Cell membrane permeability
- ◆ Key action for receptor (ligand)

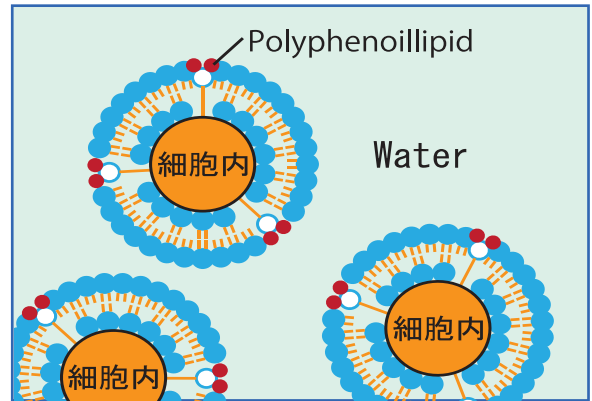
# POLYPHENOLIPID

PolyphenOil

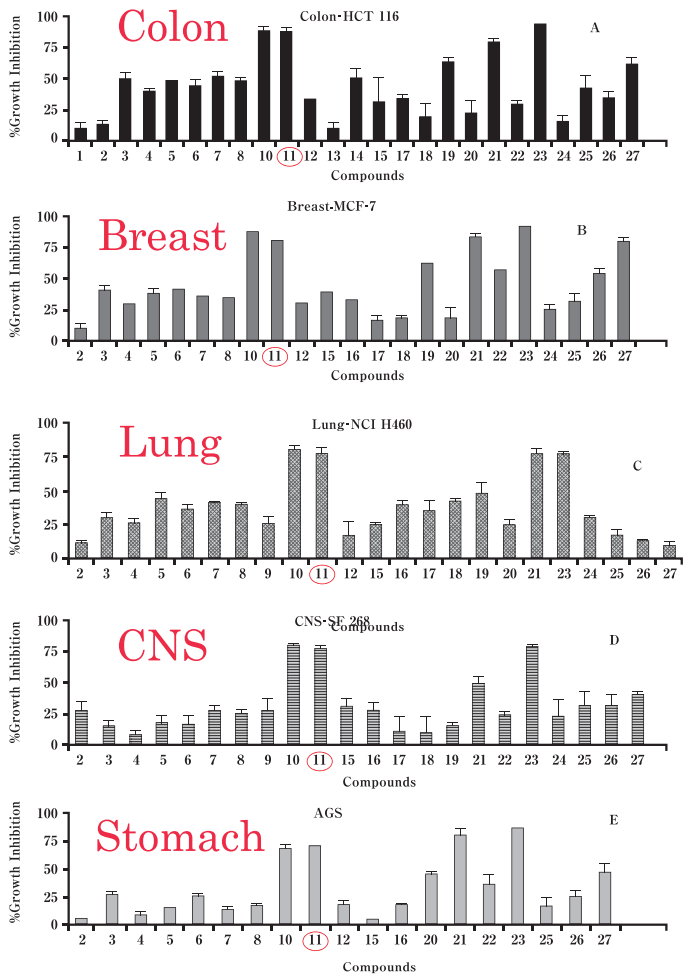
## Polyphenol



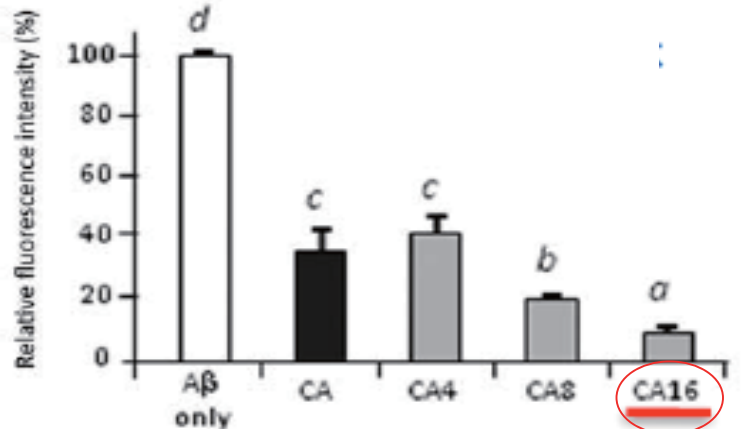
## Polyphenolipid



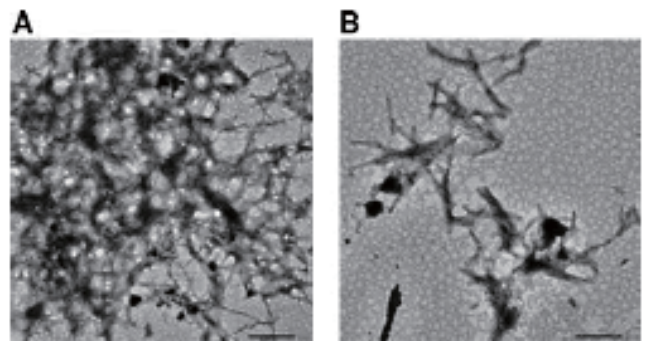
## Anti-tumor



## Anti-Alzheimer (amyloid)



CA16 strongly suppressed Aβ fibrillization



Jayaprakasam B, et al, J. Agric. Food Chem. 2006 54:5375.

Kondo H, et al, Biotechnol Appl Biochem (2014)