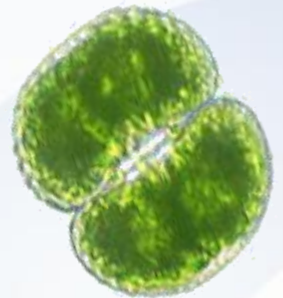
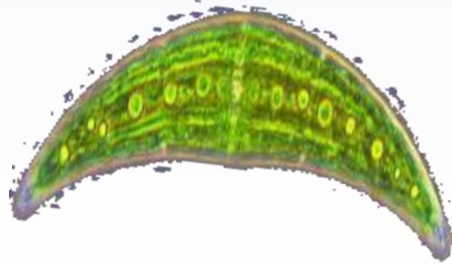
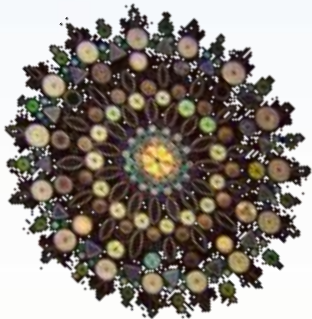


# Fermentalg

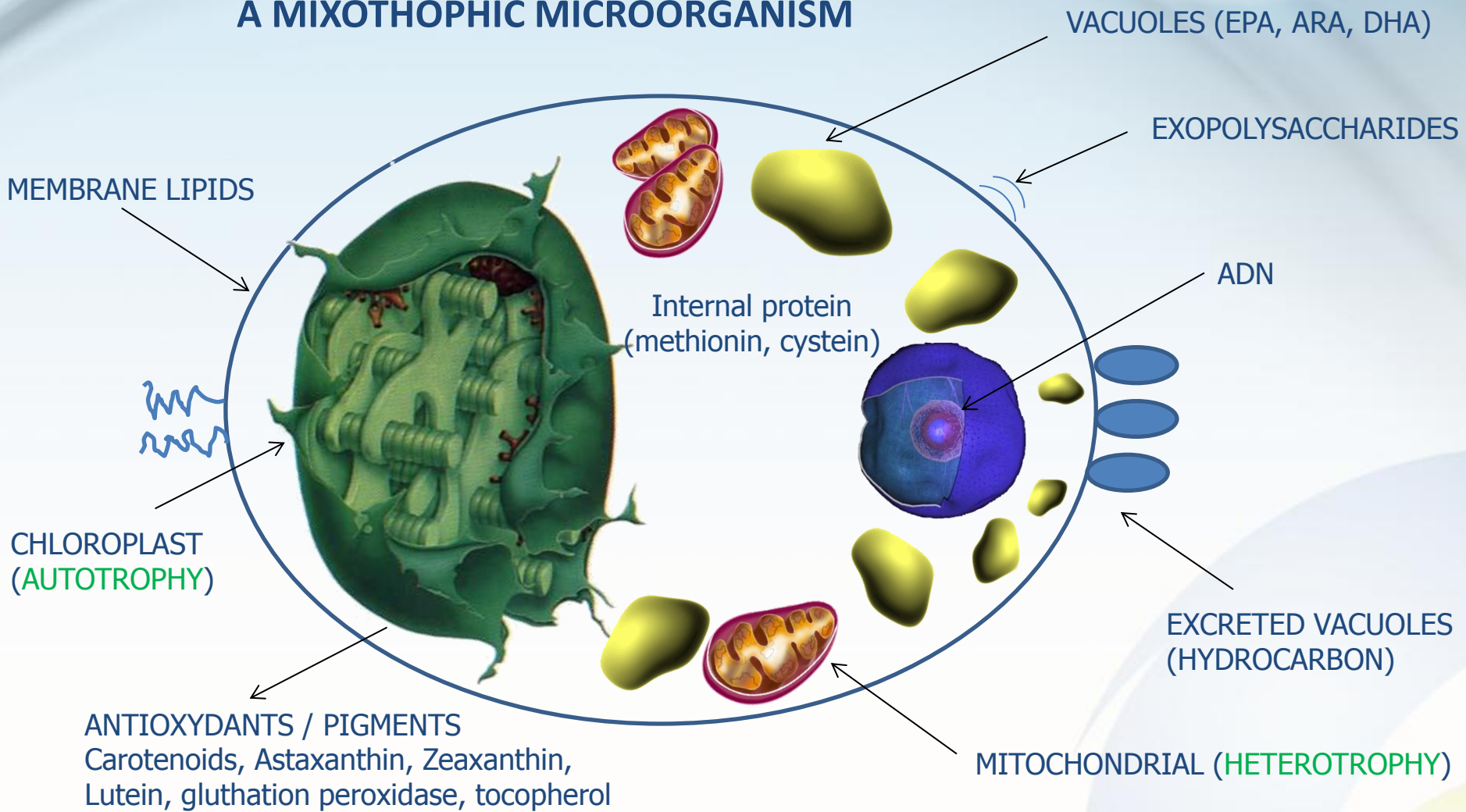
ocean green energy



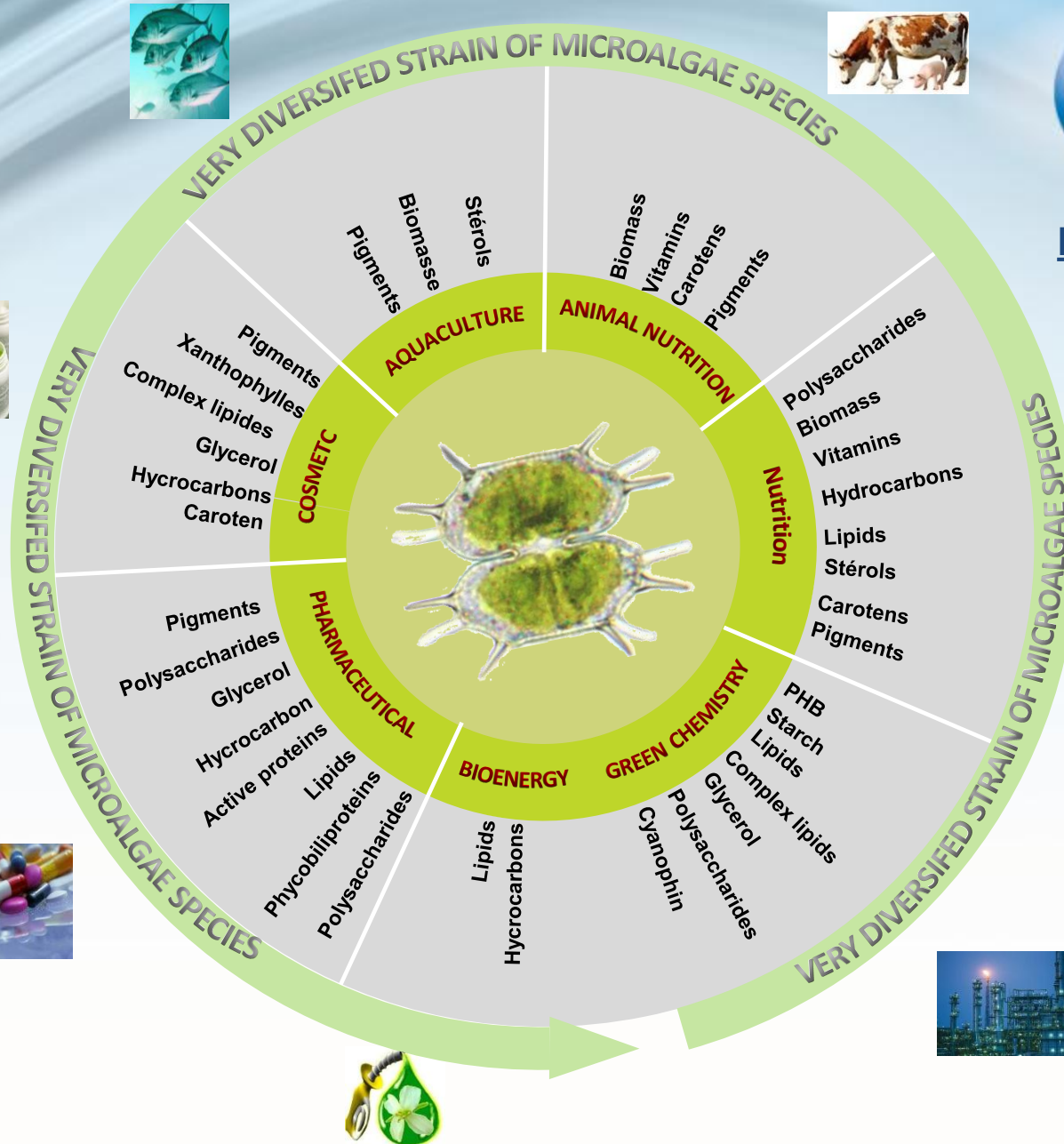
# MICROALGAE : A VAST SOURCE OF PRODUCTIVE ORGANISMS



## A MIXOTHOPHIC MICROORGANISM



## MOLECULES OF INTEREST FROM MICROALGAE & RELEVANT MARKETS



# WHAT DO WE DO IN FERMENTALG ?

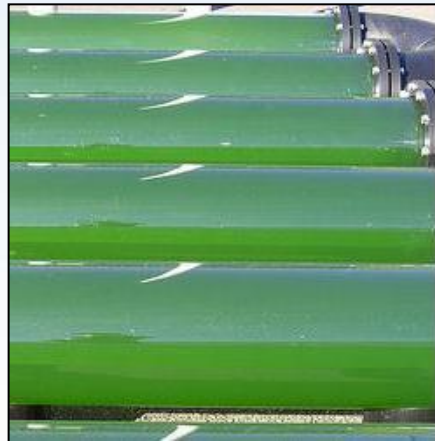


The start up Fermentalg focuses on R & D and production of different molecules from microalgae using heterotrophic and mixotrophic mode of culture

## AUTOTROPHIC USING LIGHT



EXTENSIVE ALGAL PRODUCTION  
0.1 g/liter



PHOTOBIOREACTORS  
1 g/liter

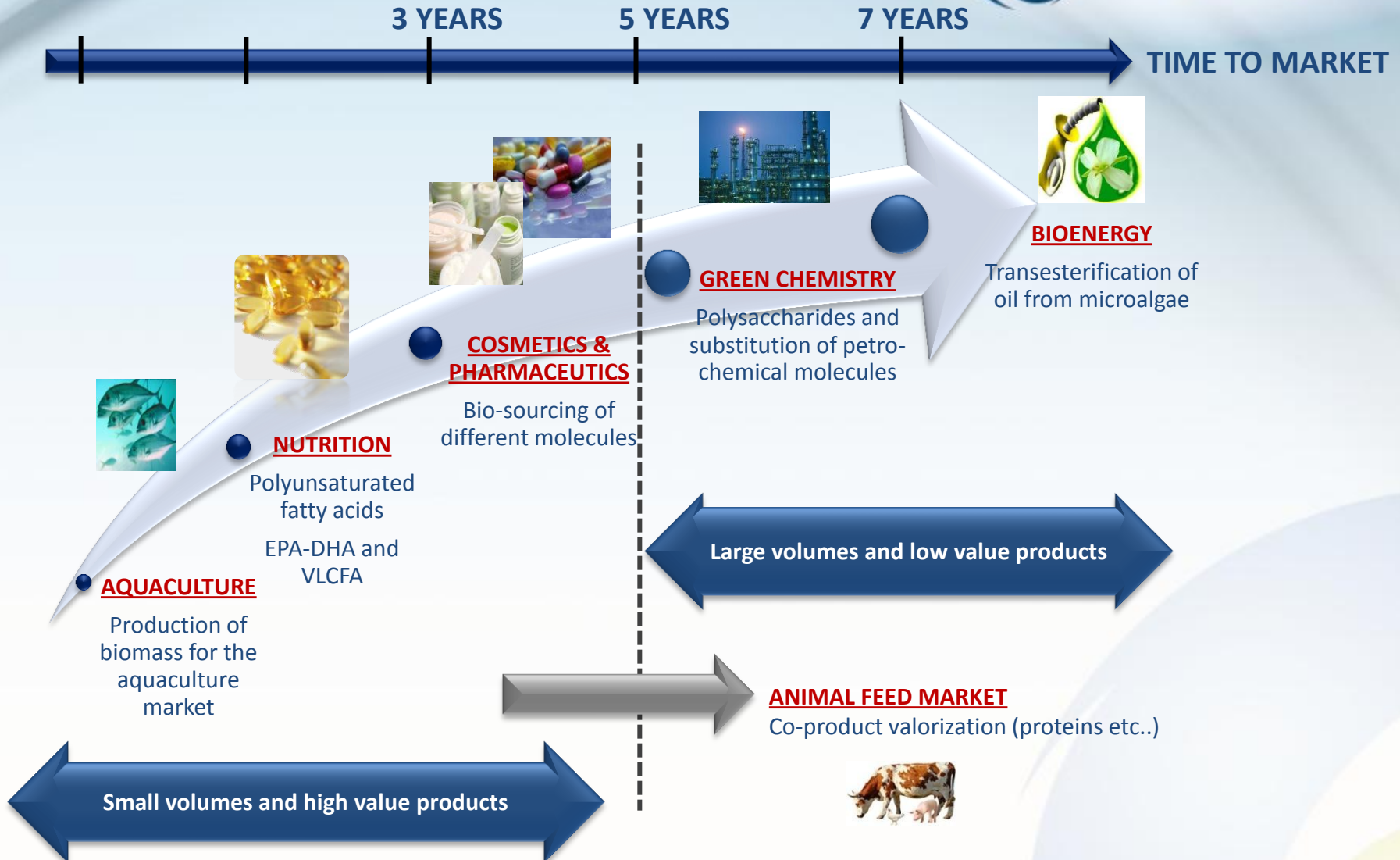
## HETEROTROPHIC & MIXOTROPHIC



FERMENTERS / BIOREACTORS  
100 - 150 g/liter

***Breaking down barriers to commercializing algae-based products***

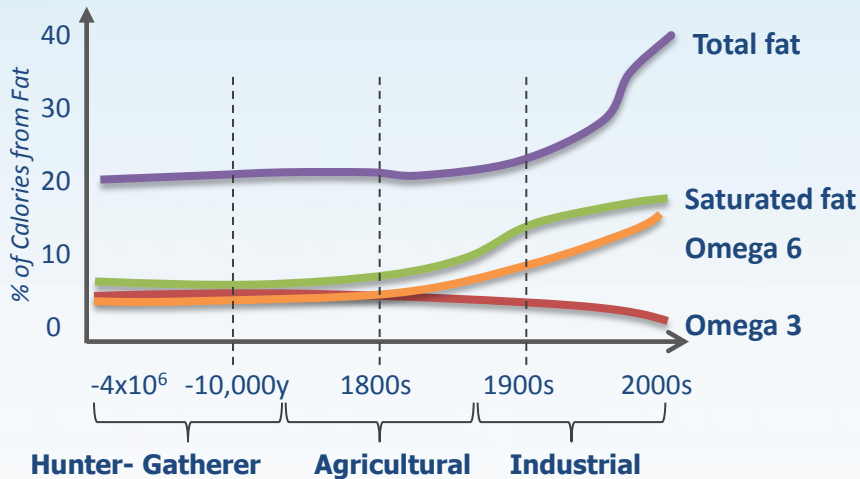
# FERMENTALG BUSINESS PLAN



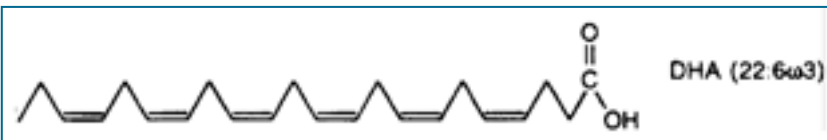
# FOCUS ON ALGAL OMEGA 3 (EPA & DHA)



- A FUNDAMENTAL NEED  
(Cell membrane, brain, heart...)



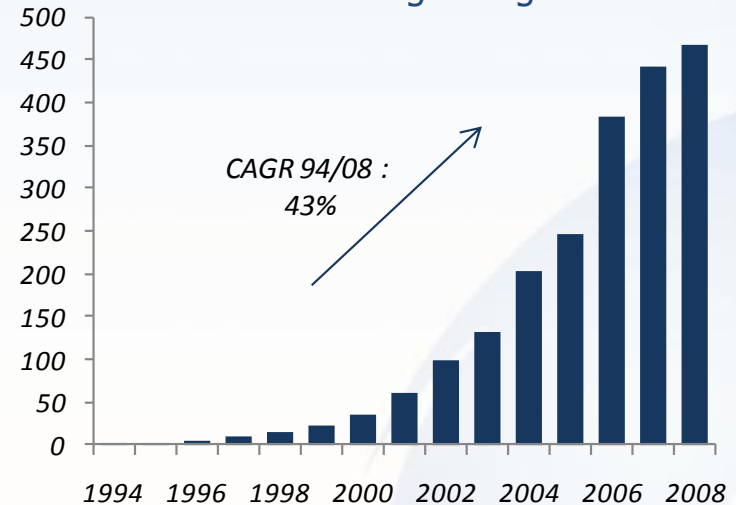
*G.A Spiller. Lipids in Human Nutrition CRC 1996 p55*



- A STRONG DEMAND

- Demand for EPA/DHA is expected to rise by 13%
- Demand for pharmaceutical and food industry

Number of new food products launches containing Omega 3

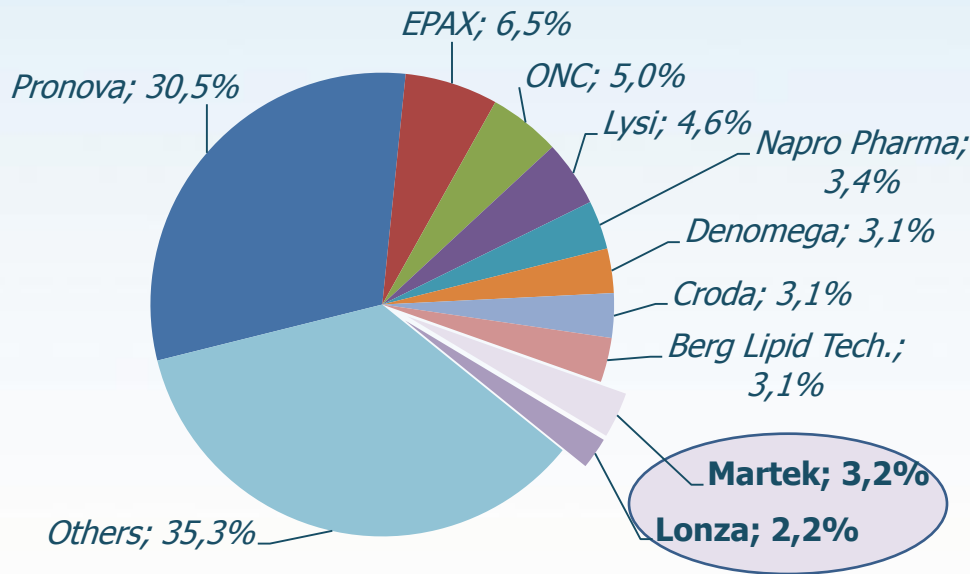


Frost & Sullivan

# FOCUS ON ALGAL OMEGA 3 (EPA & DHA MARKET & PLAYERS)



In 2008, the European Omega 3 market represented 13,597 Metric Tons for a total revenue of \$323.02M



## European EPA DHA Omega 3 ingredient market

	Algal	Fish oil
Value	5,4%	94,6%
Volume	1,2%	98,8%
Price range /kg	up to \$120	from \$20 to \$100

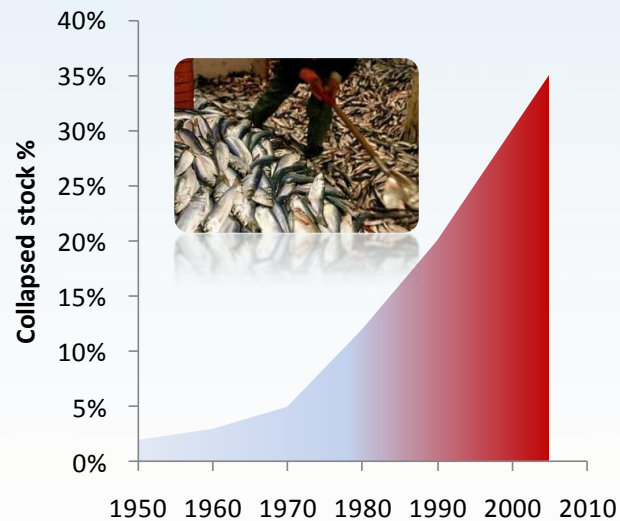
Frost & Sullivan

European EPA DHA Omega 3 ingredient market in value by source (09)

# FOCUS ON ALGAL OMEGA 3 (EPA & DHA PRODUCTION ALTERNATIVE)



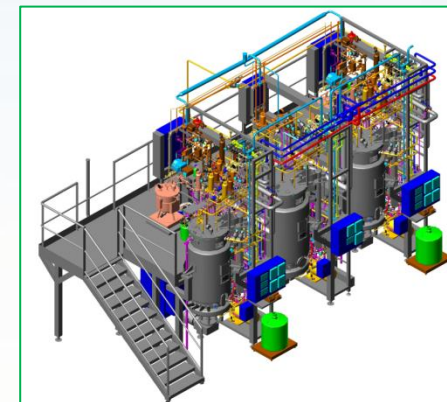
- Fish-oil cannot match population demand for EPA/DHA
- Fish stock are depleting fast and can't be a sustainable resource



- Quality issue from fish oil during complex extraction processing (contaminants, odor, various concentration of EPA/DHA...)



**Aquaculture is not a solution**  
**>2Kg wild fish → 1Kg of farmed salmon!**

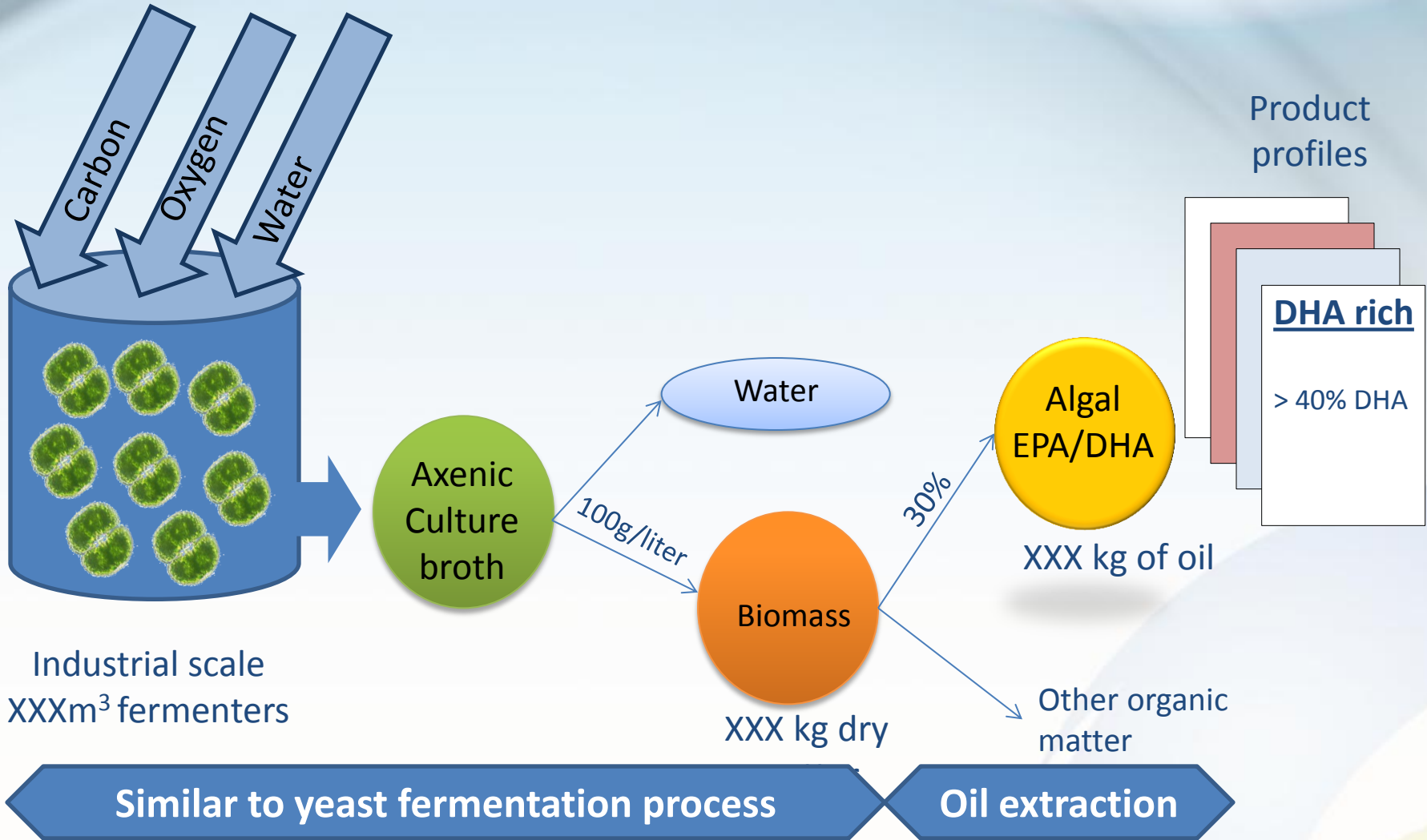


**High quality EPA / DHA production by microalgae can be the alternative**

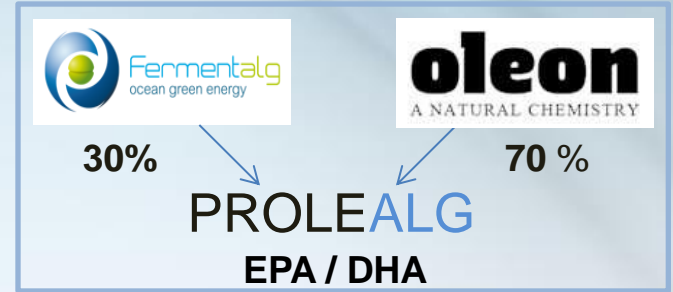


# ECONOMICS OF FERMENTALG

## EPA/DHA PRODUCTION PROCESS: 5 days run...

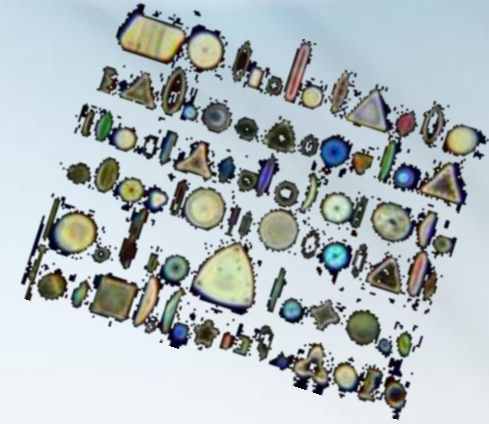
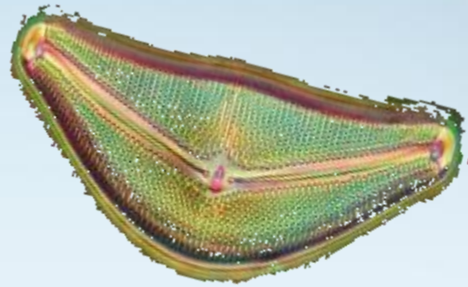


# FERMENTALG IN BRIEF & HIS INDUSTRIAL EUROPEAN PARTNERS



Bioplastiques





THANK YOU

