



# **SPIRE and Catalysing the Circular Economy BROKERAGE EVENT**

**3-4 October 2017**

***MEMBRANE ASSISTED FATTY ACIDS/  
FATTY ACID ESTERS PROCESSING***

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# ORGANIZATION/COMPANY

*Making your products & processes more sustainable*



Strategic research

Applied  
innovative  
technology

Health

Energy

Chemistry

Material

Land use

Industry

Governments

# KEY DATA



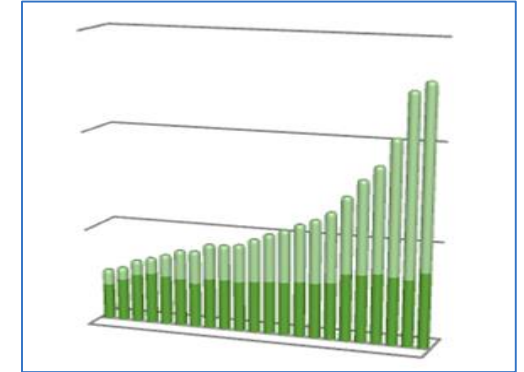
Flemish based  
Global focus



765 people  
> 25 nationalities



Central between industry - academic  
world - government



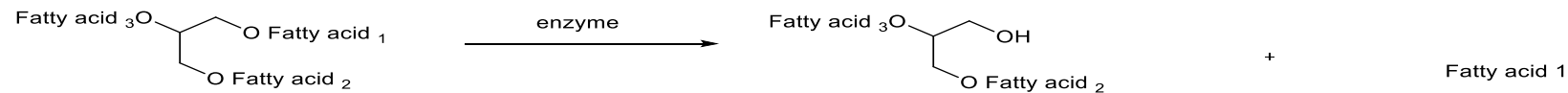
Fast-growing  
75 % external revenue

# PROJECT IDEA

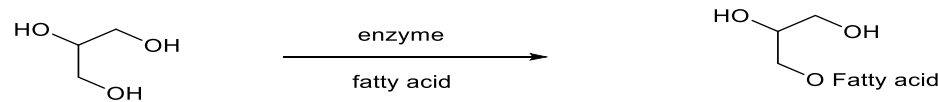
Focus on fatty acid processing and separation with membrane assisted technologies

- 2 principle directions

1. Enzyme directed, specific Fatty acid hydrolysis from tri-glycerides and membrane assisted selective separation



2. Enzyme directed, selective esterification of glycerol and membrane assisted selective separation



## Why:

- A new approach to obtain pure fatty acids with integration of membrane technologies
- Fatty acids: Potential feed stock of numerous industries from a renewable source
- Reduce cost of “pure fatty acids” and increase their application range
- An efficient method to solve an old problem and difficult to control reaction output
- ISPT and enzyme choice will be the 2 key factors

# EXPECTED IMPACT

- The global market for oleochemicals was estimated 14 billion tonnes in 2013 and will rise another 6% in the next 5 years
- The applications for fatty acids as renewable feedstock are situated in a large range of industries, but are presently limited due to a challenging separation.
- Efficient separation of their individual components can increase the market potential and can open new markets
- Growth rate of 4% per year 2014 – 2020 for fatty acid esters
  - Food the most important market for fatty esters (around 40%)
  - Personal care and cosmetic products major drivers for growth (around 20%)

# LOOKING FOR PARTNERS

## Targeted industry sectors:

- Food industry– trans fats issue, omega 3 & 6 fatty acids
- Oleochemicals
- Cosmetics
- Speciality chemicals – polymers etc
- Pharma industry – slow drug release
- Academia producing targeted enzymes

# CONTACT DETAILS

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