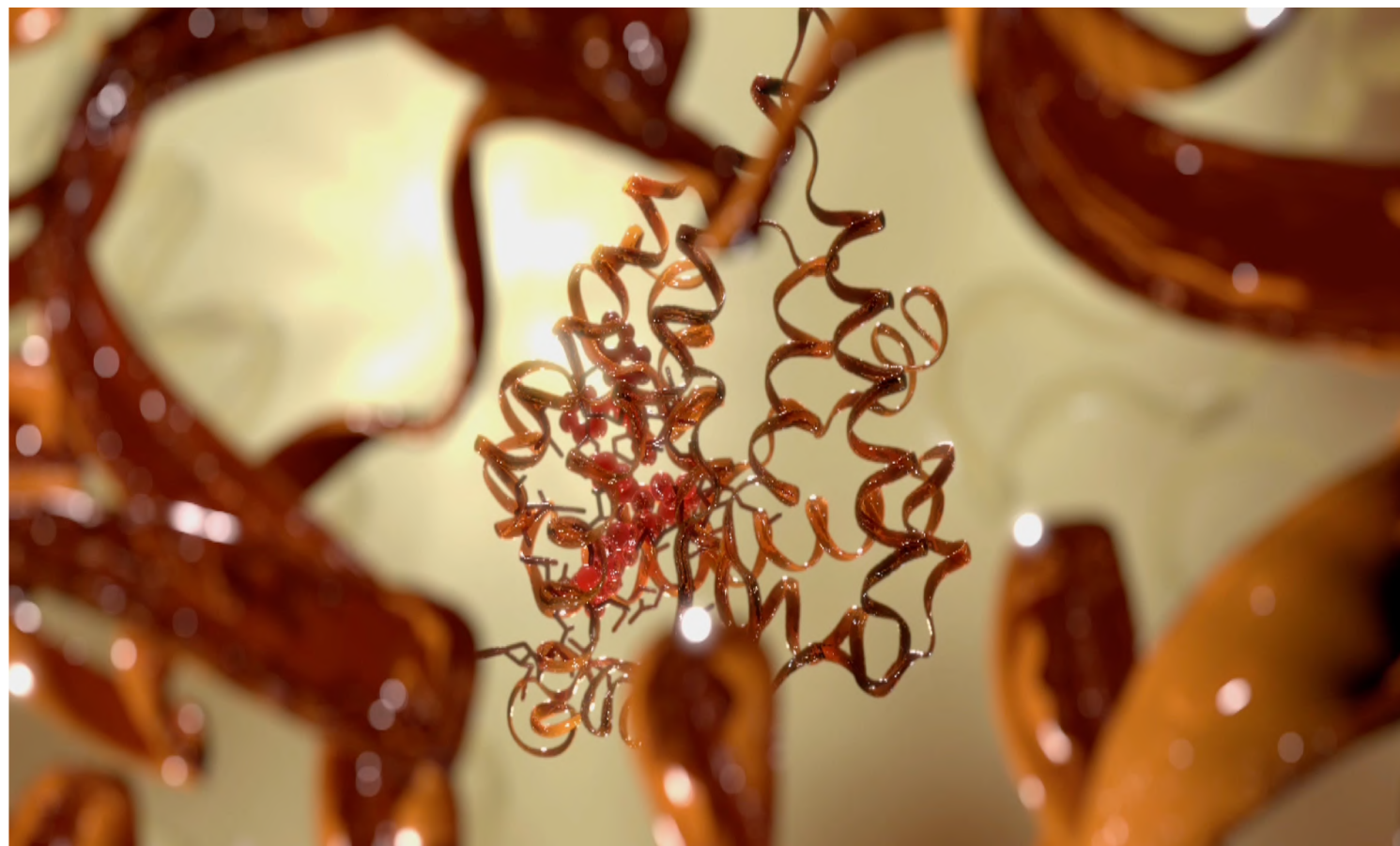




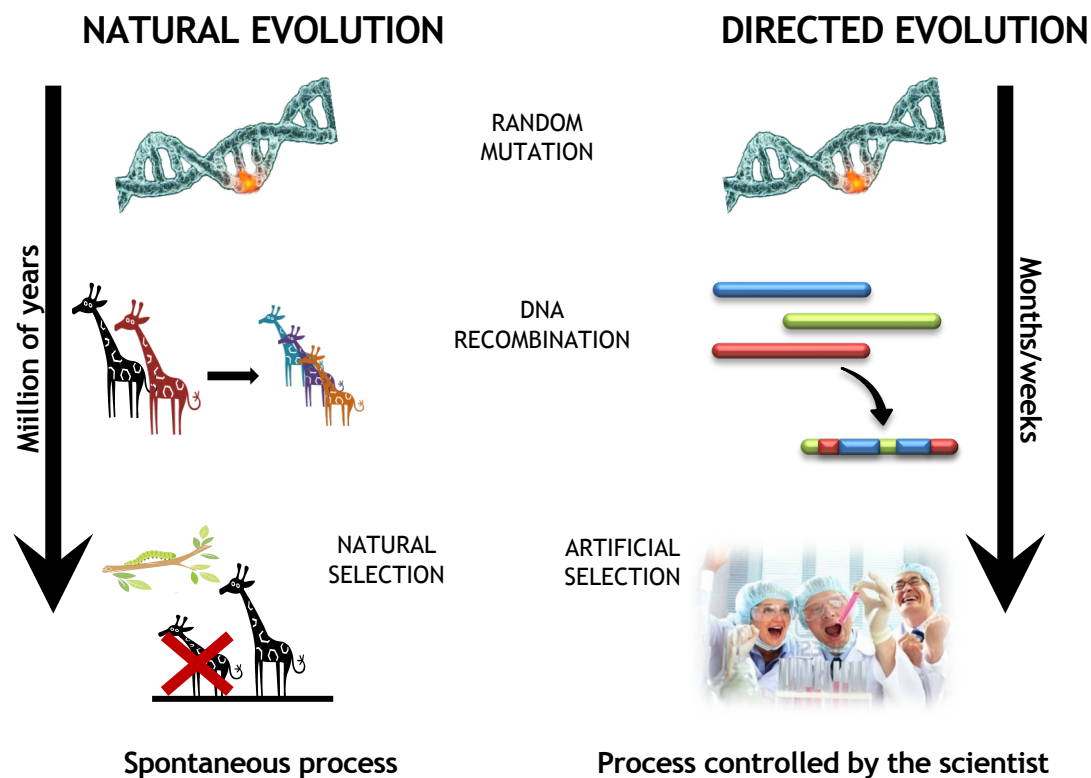
EvoEnzyme
Customized Biocatalysts



Enzymes are green catalysts for a more sustainable chemistry

Cutting edge technology

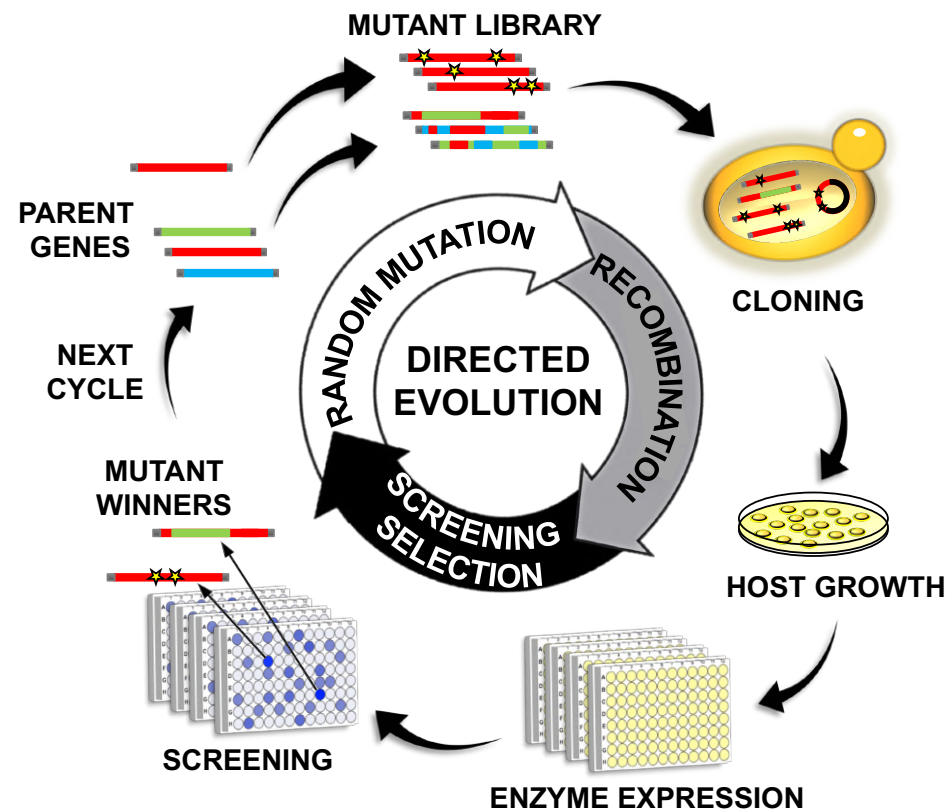
Directed Molecular Evolution



Directed evolution is a forefront technology to adapt natural enzymes to industrial needs

Cutting edge technology

Directed Molecular Evolution



Through iterative cycles of random mutation, recombination and selection enzymes with novel properties arise

Cutting edge technology

Directed Molecular Evolution

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Nobel Prize in Chemistry 2018

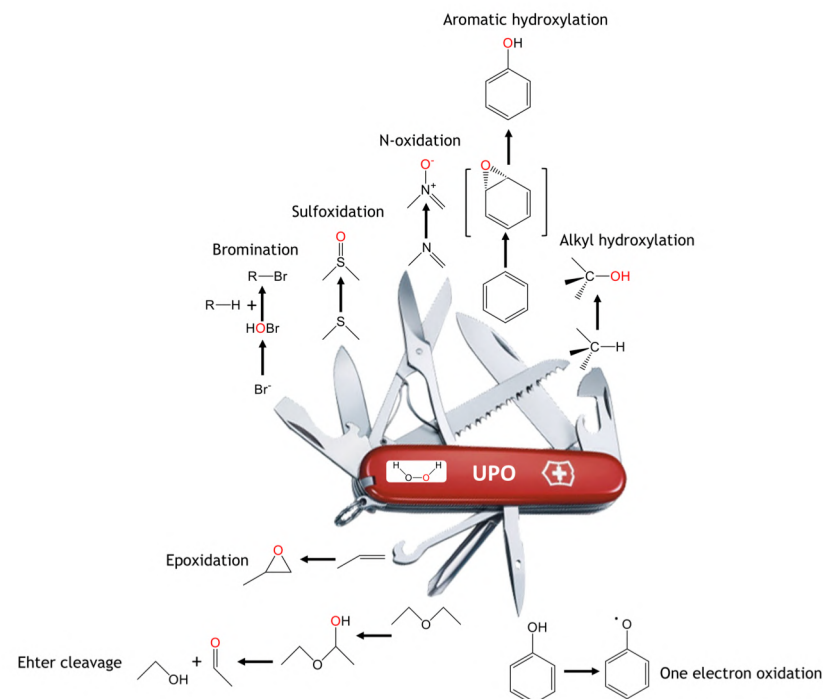
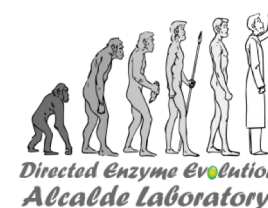
The 2018 Nobel Prize in Chemistry was awarded to Frances H. Arnold *"for the directed evolution of enzymes"*



Stockholm, Dec 2018

Directed enzyme evolution is making a direct impact on the chemical, pharma, energy and environmental sectors

Origin of EvoEnzyme



PATENTED IN EU AND EEUU



4. WO2017081355 - MUTANTS OF UNSPECIFIC PEROXYGENASE WITH HIGH MONOOXYGENASE ACTIVITY AND USES THEREOF

Office	Entry Date	National Number	National Status
European Patent Office	13.06.2018	20180863226	Published: 19.09.2018 Granted: 15.01.2020
United States of America	11.09.2019	15776369	Published: 24.01.2019

Freakley *et al.* (2019). *Nature Communications* 10: 4178.
 Tieves *et al.* (2019). *Angewandte Chemie-International Edition* 58: 1-6.
 Zhang *et al.* (2018). *Nature Catalysis* 1: 55-62.
 Van Schie *et al.* (2019). *ACS Catalysis* 9: 7409-7417.
 Ni *et al.* (2016). *Angewandte Chemie International Edition* 55: 798-801.
 Gomez de Santos *et al.* (2018). *ACS Catalysis* 8: 4789-4799.

EvoEnzyme arises as a spin-off from CSIC, after decades of research on directed evolution of ligninolytic enzymes (www.miguelalcaldelab.eu)

Hallmark of the company

1. Evolved ligninolytic enzymes

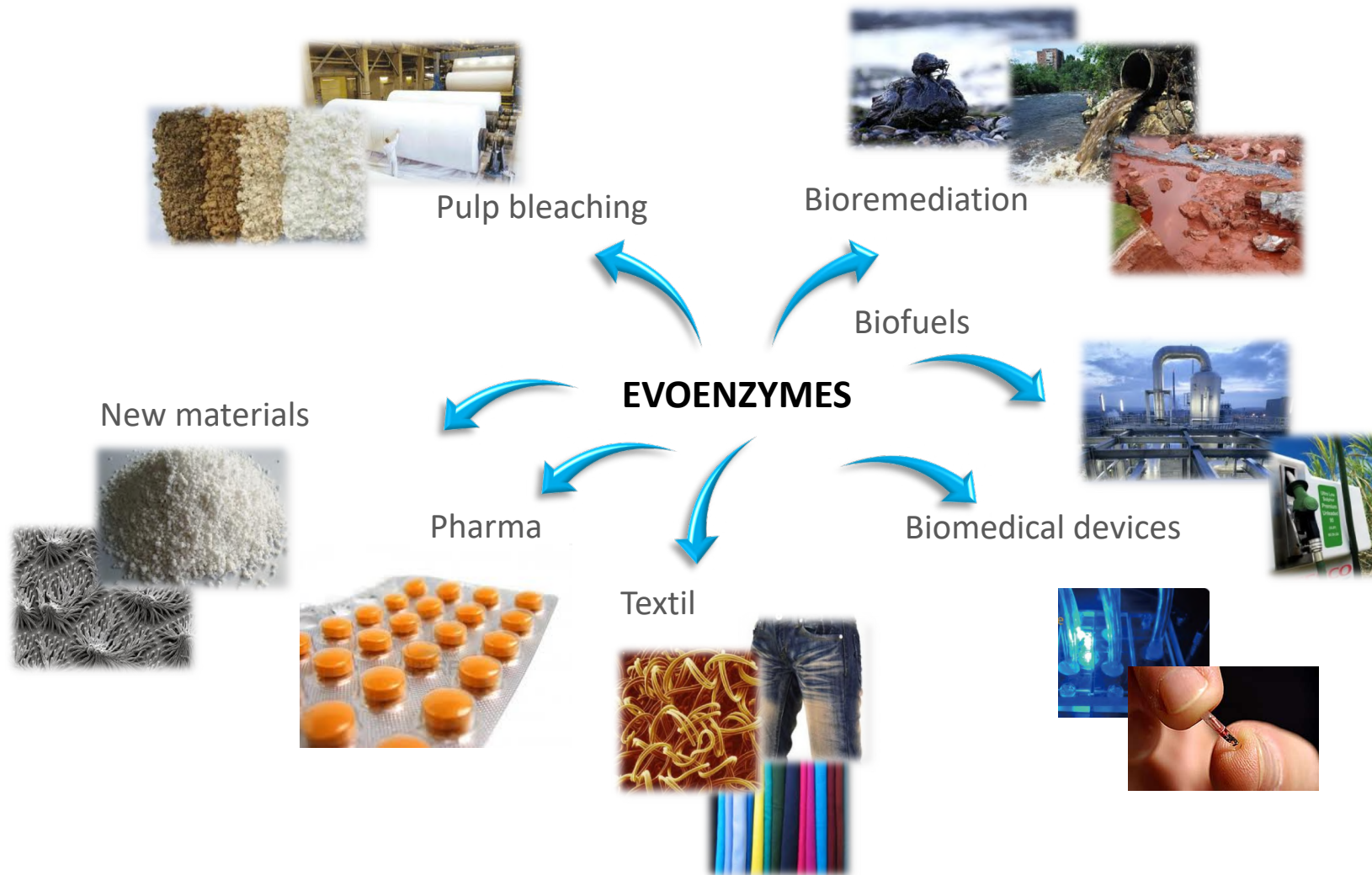


Ligninolytic enzymes from white rot fungi are being evolved in the laboratory for different applications

EvoEnzyme brings together exclusively evolved ligninolytic enzymes with forefront directed evolution technology



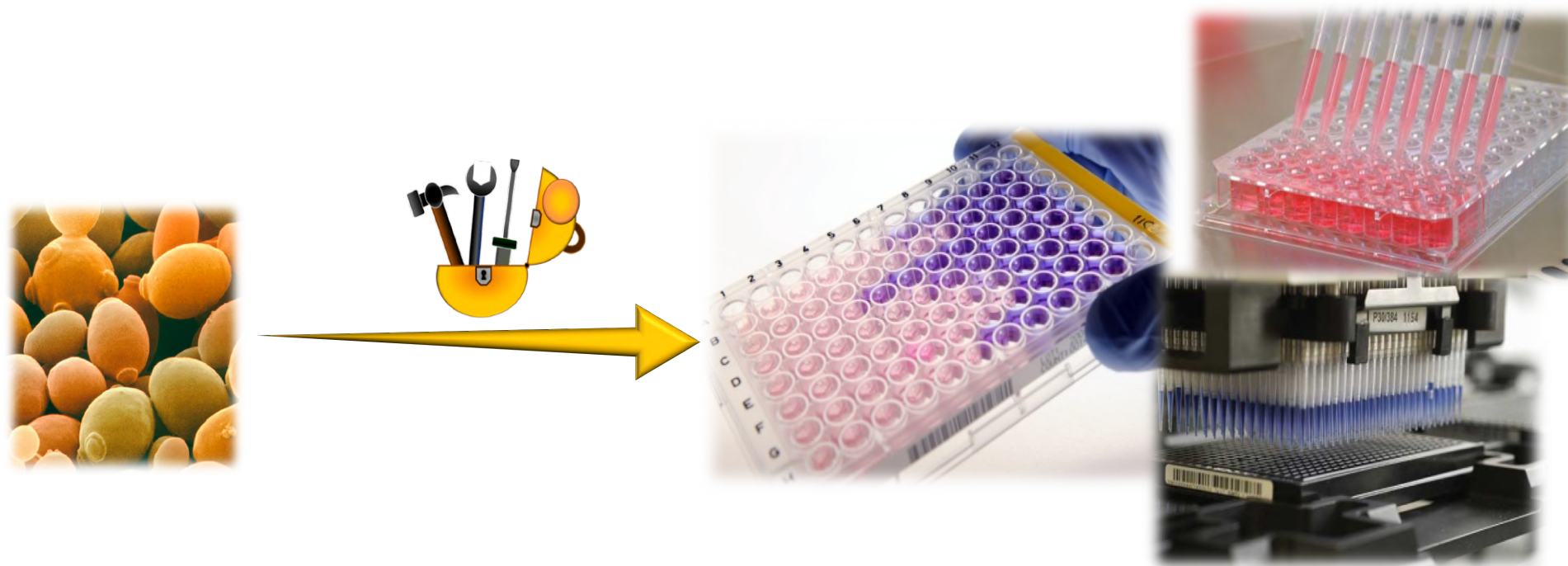
Application



Alcalde M. (2015). Engineering the ligninolytic enzyme consortium. *Trends in Biotechnology* 33: 155-162.

Own technology

2. Own technology in directed evolution based on yeast physiology



EvoEnzyme counts on a portfolio of methods for directed enzyme evolution, our speciality

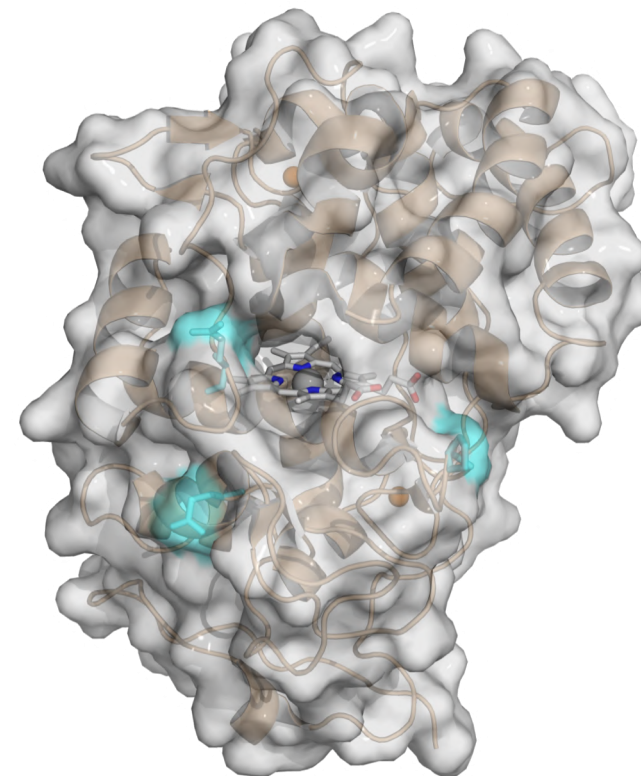
Catalog

1



SERVICES OF AD-HOC ENZYME DESIGN
BY DIRECTED EVOLUTION

2



COMMERCIALIZATION OF EVOLVED ENZYMES

SECTORS





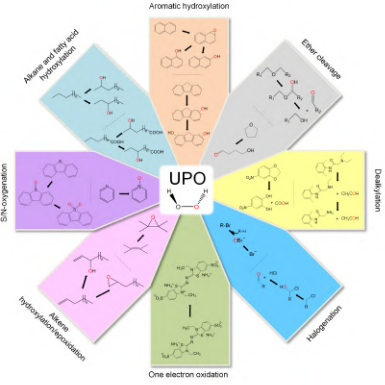

PHARMA SECTOR



PROBLEM: Complex and low effective synthesis of human drug metabolites for drug discovery

SOLUTION: Direct synthesis of metabolites through evolved enzymes

Main activities of EvoEnzyme

ACCELERATOR	PROJECTS		PLATFORMS
<p>HEALTHSTART 2018</p>	<p>GRANT CAM RIS 3 EVOFARMA</p>	<p>I+D UPO KIT</p>	<p>Technology Platform SynCell CSIC</p>
	<p>EVOLVED ENZYMES FOR PHARMACEUTICALS DEVELOPMENT.</p> 	 <p>PRODUCT UNDER DEVELOPMENT</p>	<p>GOAL: Development of synthetic cells.</p>  <p>http://www.syntheticcell.eu</p>

ENVIRONMENTAL AND INDUSTRIAL SECTOR

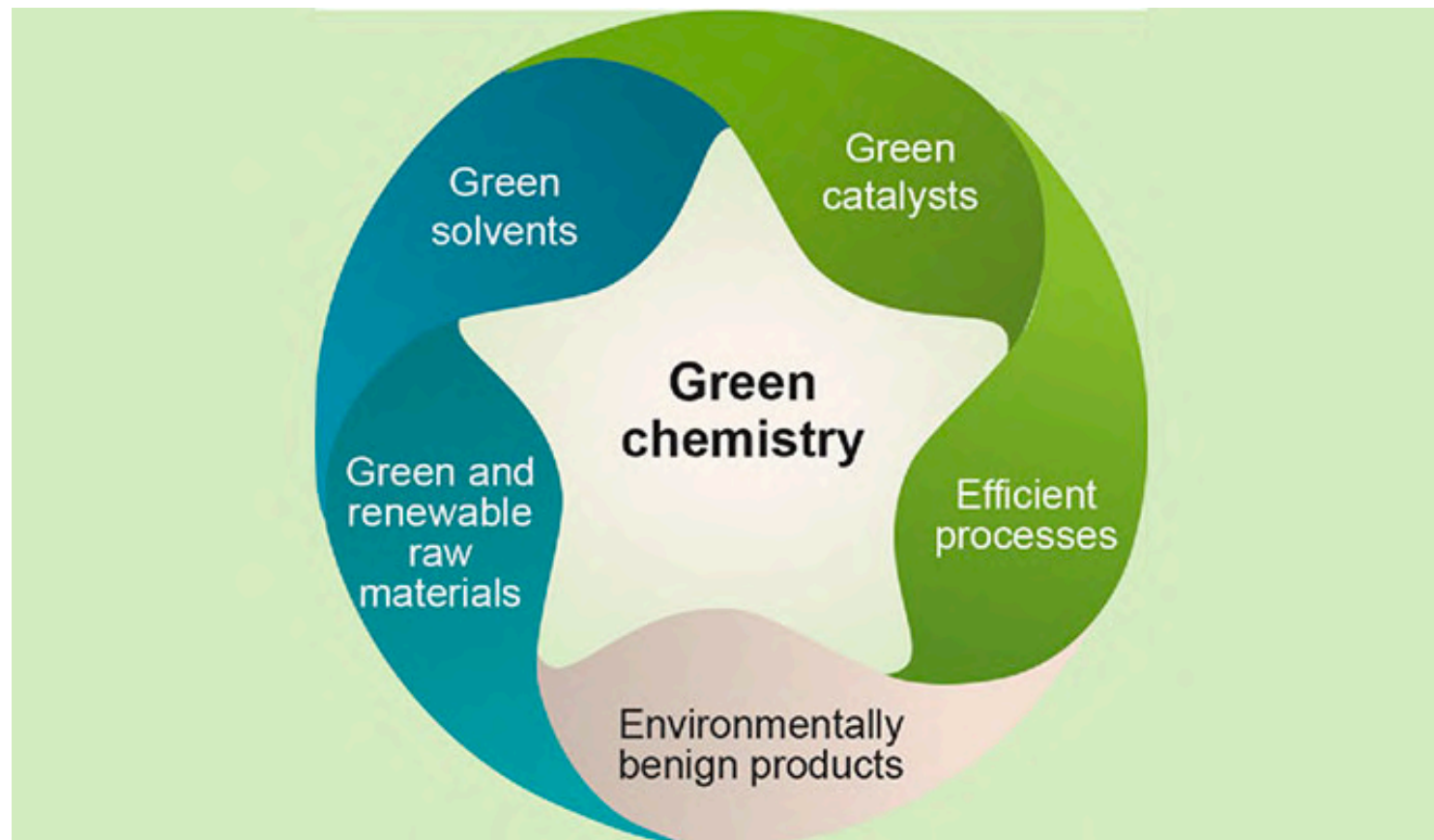


PROBLEM: Degradation and valorization of plastics

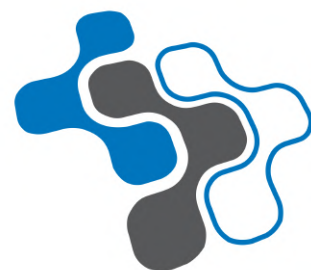
SOLUTION: Enzymes customized for plastic treatment

Main activities of EvoEnzyme







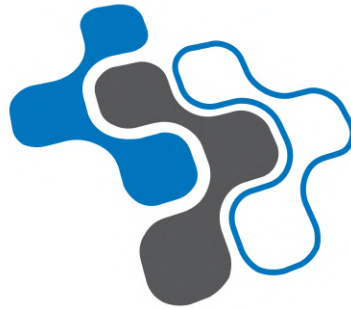


EvoEnzyme
Customized Biocatalysts

THINK & BUILT IN GREEN



GREEN CHEMISTRY



EvoEnzyme
Customized Biocatalysts

<https://evoenzyme.com>

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