# CONFERÊNCIA INOVAÇÃO ABERTA EM PORTUGAL

ISAG·PORTO·30·NOV·18

AGÊNCIA NACIONAL DE INOVAÇÃO

**SIAC** - Iniciativa de Transferência do Conhecimento

COFINANCIADO POR:

COMPETE 2020

PORTUGAL 2020

UNIÃO EUROPEIA
Fundo Europeu de Desenvolvimento Regional

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SILICOLIFE

# Designing Nature

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www.silicolife.com

SILICOLIFE

# Rational design of cell factories and novel pathways

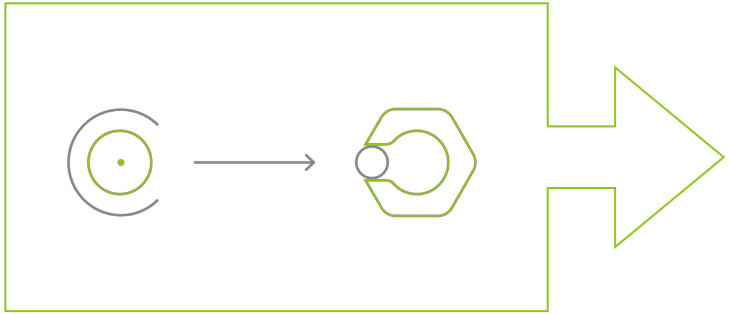
- **Founded in 2010** and 100% owned by its founders
- Enabling the design of **optimized microbial strains** for the production of chemicals, food ingredients or biopolymers
- Player in the **design** step of the **synthetic biology cycle, using models, simulation and optimization**
- Bridging computer sciences, life sciences and bioengineering
- Working with **leading chemical, materials and synthetic biology companies**

SILICOLIFE

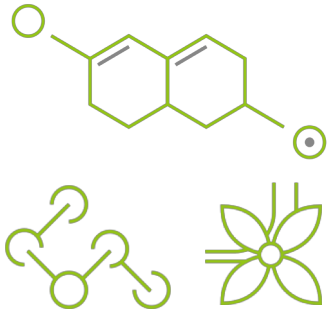
# Industrial biotechnology
# The invisible bio-revolution

## Renewable feedstocks

## Industrial Bioprocesses



## Production of chemicals



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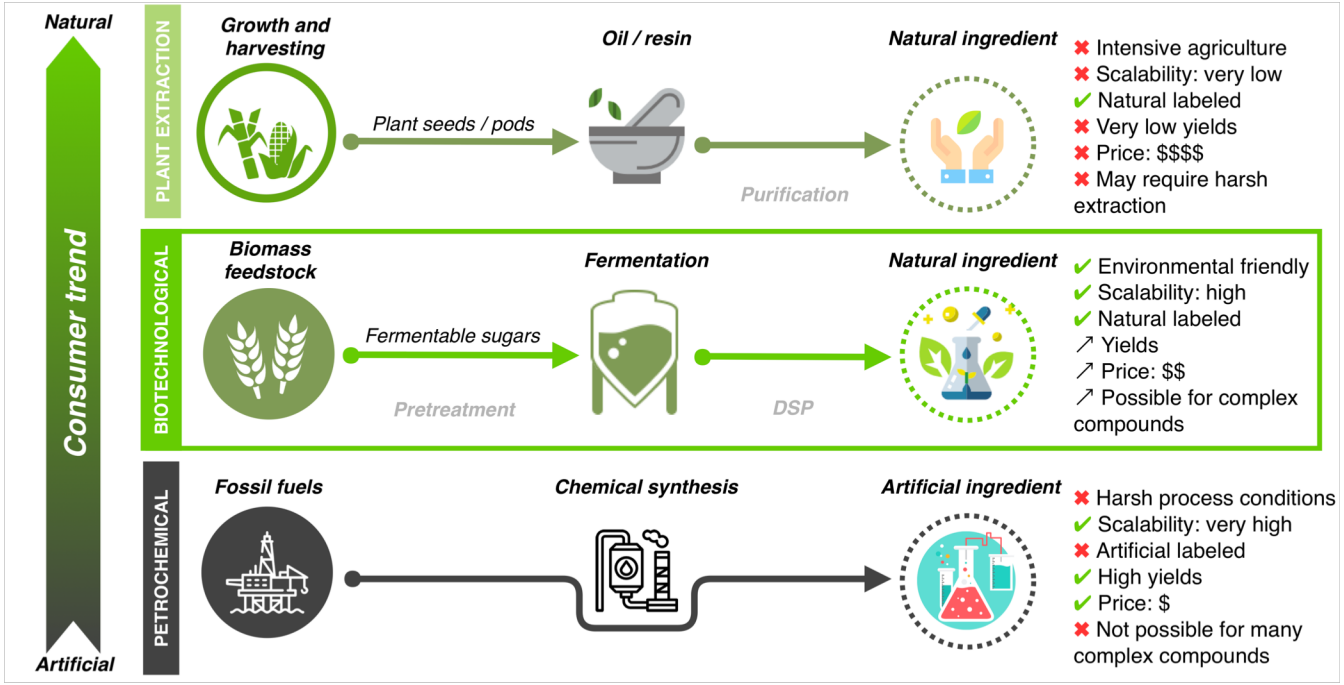
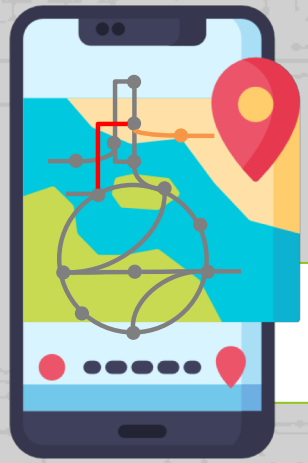
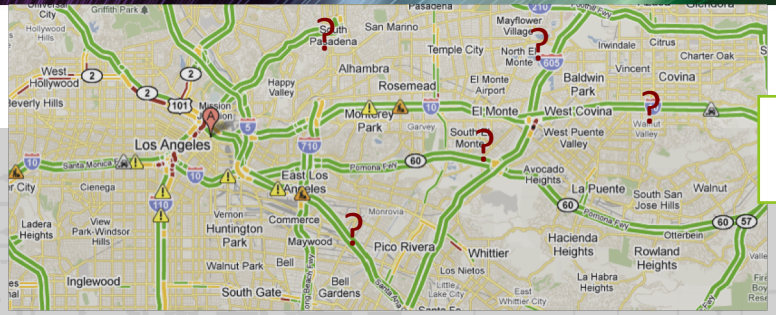
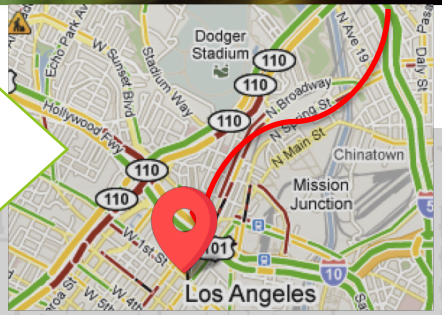
# Biotechnology benefits





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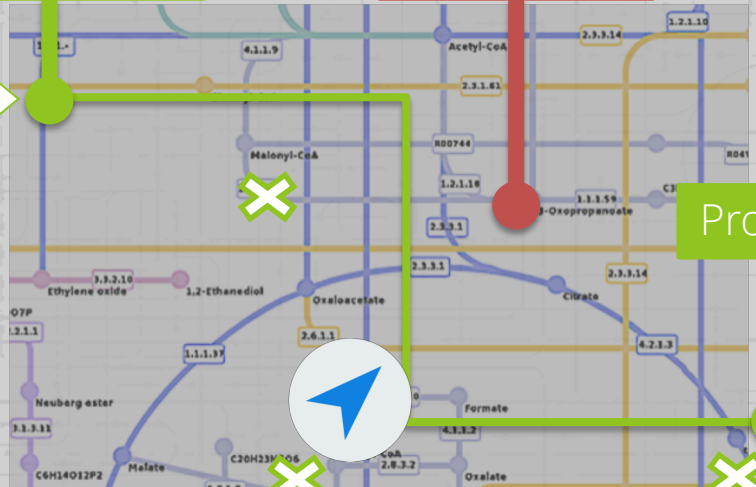
Raw material

By-products

Product




# Cell factory design
# a GPS to improve the microbe

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# Clients range from innovative startups to leading chemical, materials and synthetic biology companies

40 Hottest Companies in the Advanced Bioeconomy 2016

Contracted projects with:

- ✓ Fortune 500 companies
- ✓ Multinational conglomerates
- ✓ World leading agri-business companies
- ✓ Global leaders in building block chemicals, polymers and biosynthetic development
- ✓ 10+ collaborative R&D grants

MIT Portugal

Massachusetts Institute of Technology

FCT Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR

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# International R&D projects

- **H2020 DD-DeCaF**, Bioinformatics services for Data-Driven design of cell factories
- **FP7 BRIGIT**, Biotechnology for novel biopolymers
- **QREN PEM**, Platform for Metabolic Engineering
- **PT2020 SISBI,** Software to aid the Industrial Biotechnology decision process
- **ERA-IB DeYeastLibrary**, Designer yeast strain library optimized for metabolic engineering
- **ERA-IB-2 ICPRES**, Integrated Process and Cell Refactoring Systems for Enhanced Industrial Biotechnology
- **ERA-IB-2 DYNAMICS**, Analysis and optimization of industrial microorganisms under dynamic process conditions
- **ERA-MBT Thermofactories**, Thermophilic cell factories for efficient conversion of brown algae biomass to high-value chemicals

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