



## Bioenergies, Biobased molecules et Biobased materials from Renewable Carbone

3BCAR Carnot Institute mobilizes two key levers for Bioeconomy emergence: Biotechnologies and Green chemistry; gathering multidisciplinary approaches from biomass production, biorefinery until functional properties. Circular economy is considered by waste and byproducts valorization, cascading uses and eco-design.

[www.3bcar.fr/en](http://www.3bcar.fr/en)

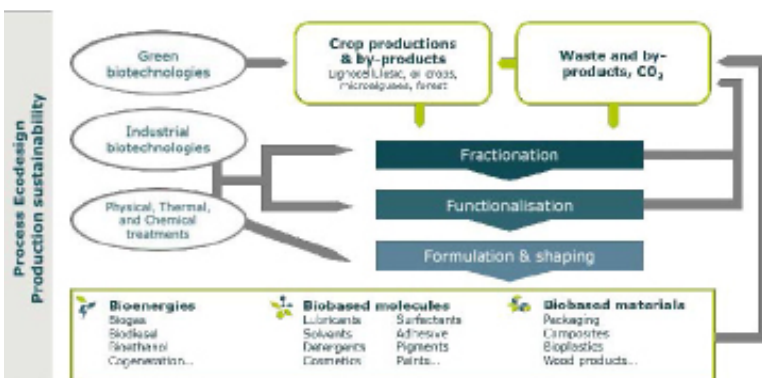


# INNOVATE AND SUPPORT BIOECONOMY EMERGENCE WITH BIOTECHNOLOGIES AND GREEN CHEMISTRY

## Bioeconomy a model for the future

Faced with diverse actual challenges (sustainable development, fossil resources depletion, climate change...), Bioeconomy is recognised in Europe as a model for the future. Based on production from biological renewable resources conversion, this economical strategy benefits from both technological and systemic approaches.

## From biomass... to functional properties

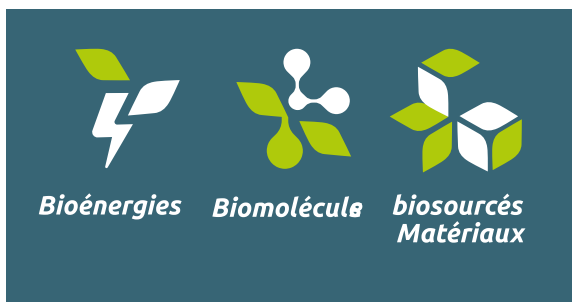


## 3BCAR: a multidisciplinary skills offer

- Plant biomass production with enhanced properties
- Biomass fractionation and biorefinery
- Functionalisation for obtaining building blocks
- Bioproducts formulation and shaping
- Process ecodesign and Production sustainability

### Target markets

- Biomass production (crops, microalgae) and plant biotechnologies
- Biorefinery
- Industrial biotechnologies
- Green chemistry: lubricants, surfactants, solvents
- Fine chemistry: cosmetic and biologically active molecules
- Bioenergies: biofuel, biogas
- Biobased materials
- Ferments and enzymes
- Environment and waste valorization
- Agro-industry
- Territories management

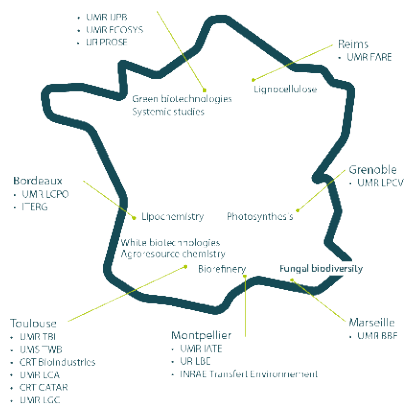




## A SCIENTIFIC NETWORK OF EXCELLENCE AVAILABLE TO BOOST

### A french structured R&D network, from laboratory to pilote scale

Skills and technological capacities to support partners climbing on TRL scale, from upstream research in laboratory until pilote scale (TRL 6)



- 12 research laboratories
- 4 centers for technological resources (CRT Bio, CATAR, GPTE, ITE)
- 1 preindustrial demonstrator (TWB)
- 1 industrial technical center (ITERG)

### Our engagements to facilitate partnership



#### One stop shop

Listening to your needs in order to orientate you towards competencies of more than 500 scientists



#### Contractualisation quality

Professionalism, tools and procedures for steering contractual relationship. Action certified ISO9001



#### Defined IP policy

Good practices for intellectual property and technology transfer, to ensure results traceability and protection

### Key Figures

Permanent staff  
(full-time equivalent): 756  
PhD Students: 217

Partnership incomes  
with industry: €19M  
Global budget: €89,4M

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