

TWB RESEARCH PROJECTS WITH A FINANCIAL SUPPORT FROM THE EUROPEAN UNION IN THE CONTEXT OF A FEDER SUBSIDY

2014-2020 FEDER/FSE PROGRAM « Midi-Pyrénées et Garonne » - CALL FOR PROJECTS « POST-DOC »

In 2015 :

- **INSEREE project:** Engineering *E. coli* platform strains for the production of unnatural amino acids-containing proteins.
- **ROBUSTRAIN project:** Strain improvement regarding industrially relevant stresses by an innovative strategy based on gene expression variability and FACS.

In 2016 :

- **CRISPY project:** Genome editing via CRISPR technology for the yeast *Yarrowia lipolytica*.
- **SUPERYEAST project:** Engineering yeast with increased fermentation capacity.
- **XANTHALG project:** Understanding the biosynthesis and regulation of xanthophylls in *Phaeodactylum tricornutum*, a prerequisite towards creating innovative molecules.

In 2019 :

- **BIFACE project:** The Biface project targets current issues associated to the development of new totally biosourced polymers. The objective is to exploit a new multi-step enzymatic approach for the custom synthesis of polymers with advanced properties. This kind of approach has never been studied before.
- **BIROBOT project:** *Physarum polycephalum* (PP) is a unicellular microorganism of the protist family with original properties (resolution of labyrinths, ability to produce different classes of molecules of interest, extreme motility). The Biorobot project aims to explore the potential of PP as a biosensor and as a tool for the production of molecules of interest.

In 2020 :

- **ELECTROBIOPOWER project:** Microbial electrosynthesis is an emerging bioprocess allowing the production of molecules of interest by microorganisms from CO₂ and electricity. Electrobiopower aims to optimize this process by combining enzyme and microorganism engineering methods.

The results of these projects are confidential.



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