

Bioproduction and modulation of the composition of Single Cell Protein (SCP)

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μO-Prot project (ANR-23-DIVP-0001)

MICRO
Prot

Production de Protéines
d'Organismes Unicellulaires



RÉPUBLIQUE
FRANÇAISE

Liberté
Égalité
Fraternité

anr[®]



3BcAR

Qualiment
Réseau de recherche pour l'innovation alimentaire

tbi
Toulouse Biotechnology Institute
Bio & Chemical Engineering

CRITT
BIO INDUSTRIES

INSA
TOULOUSE

U Université
de Toulouse



Website

✓ Context ...



Global population growth



Climate change



Nutrition transition

Global protein demand



Alternative source of protein :
Single Cell Protein (SCP)



Fast growth

High protein content

Weather-independent

Minimal land requirement

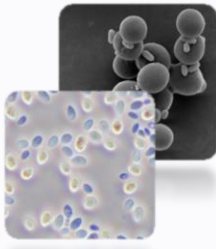


Amount of nucleic acids

Low digestibility

Organoleptic quality

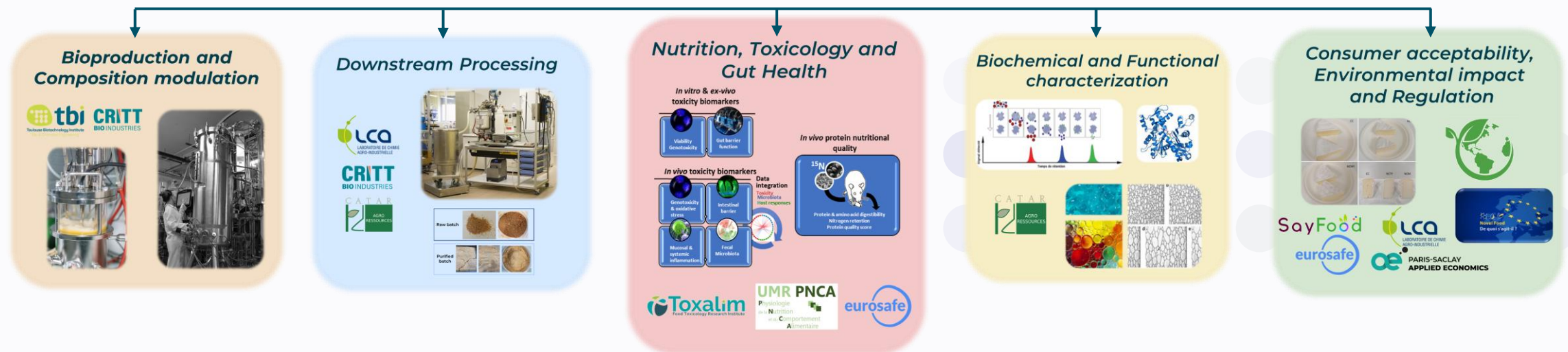
Societal acceptability



✓ μ O-Prot project (ANR-23-DIVP-0001)

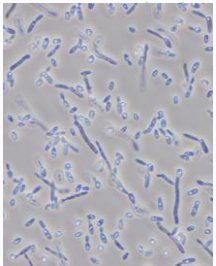
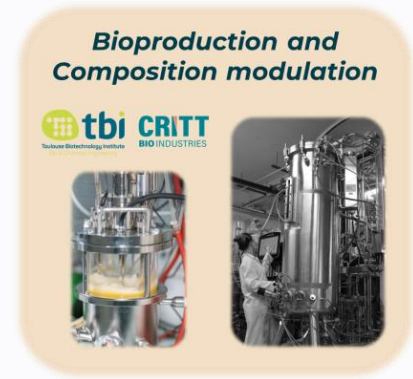


A **multidisciplinary project** aimed at assessing the **potential of SCPs** from their **production** to their integration into **food systems**.



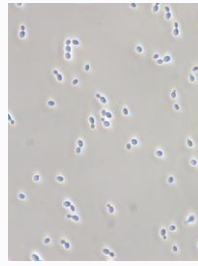
✓ WP Bioproduction and Composition modulation

Objective : Modulation of the composition of SCPs through the use of **different microorganisms** and **fermentation strategies**.



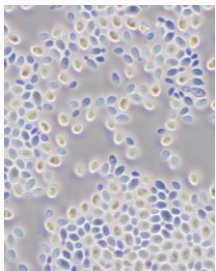
Yarrowia lipolytica

GRAS oleaginous yeast
Ovoid or filamentous shape



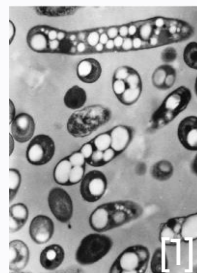
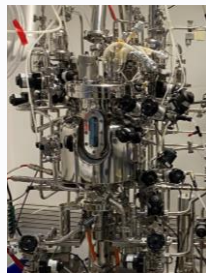
Rhodotorula glutinis

Oleaginous yeast producing
caroténoïds (β -Carotene, Torulene, ...)



Phaffia rhodozyma

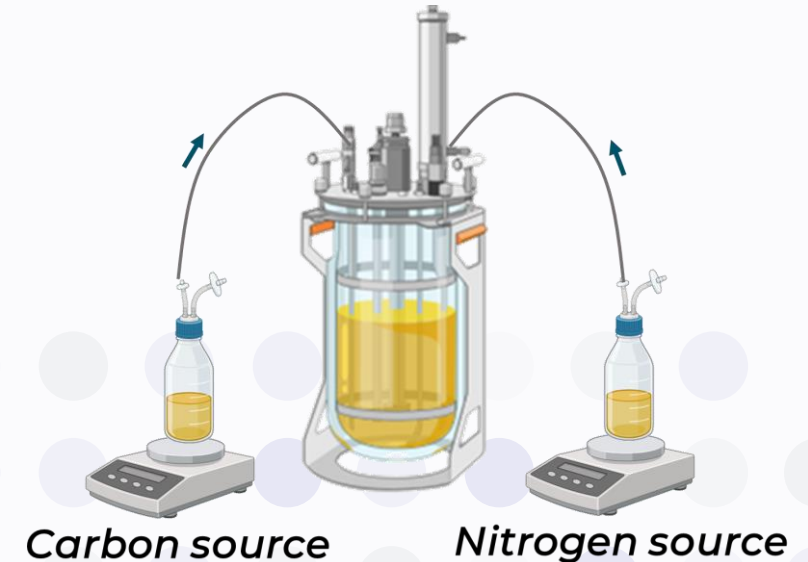
Large yeast producing astaxanthin,
a powerfull antioxydant



Cupriavidus necator

Bacteria able to use CO_2
and H_2 for growth

Ex : Controlled N/C ratio



Thank you for your attention !

Stop by our poster !

