Systemic Optimization of « Bioprocess / Microorganism »

Scientific Objective:
Surpassing the first step of molecule production (usually reachable in batch mode) and reaching the best titres, productivities and yields via the management of the cellular activity essential for its robustness.

Highlights: Oleaginous yeasts (12 papers, 3 patents)

Kinetic analysis of metabolic shifts at macroscopic, transcriptomic (Cescut et al. 2011) and proteomic levels (Ochoa et al., 2014)

Amplification of lipids accumulation (Patent11-59361)
150 kg$_{dcw}$m$^{-3}$
0.44 - 0.75 g$_{lipid}$/g$_{biomass}$
0.31 kg.m$^{-3}$.h$^{-1}$

Cell morphology & Rheology
(Manon et al., 2011, Timoumi et al., 2016, 2017)

Modulation of carbon chain length (Patent submitted)