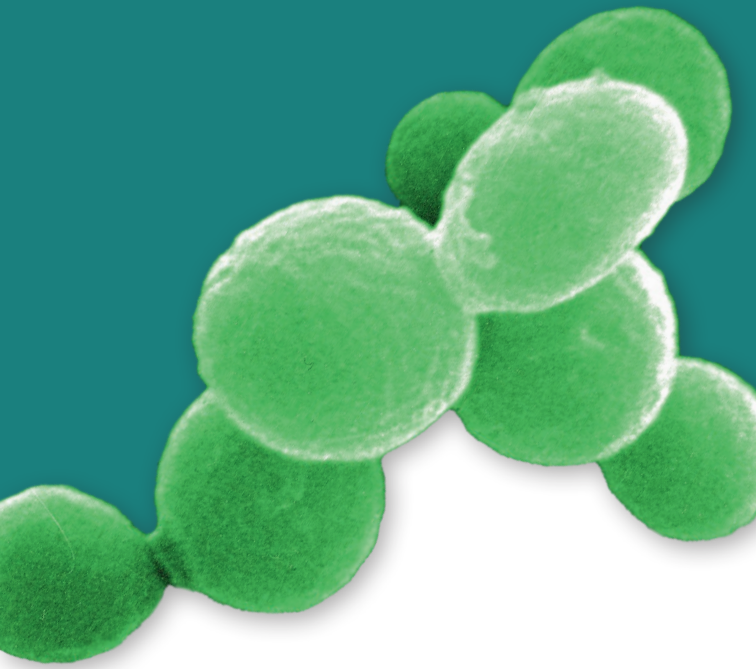


CHASSY

Model-Based Construction and Optimisation of Versatile Chassis Yeast Strains

CHASSY in Brief

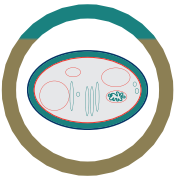
CHASSY is a collaboration between academia and industry that will develop yeast platforms for the production of high value products for the cosmetic and nutrition sectors.

Using systems and synthetic biology, we will remodel three species of yeast suited to specific applications. Then, we will fine-tune their cellular networks to construct strains with optimised metabolic pathways.

Products made in these optimised strains will contribute to the European bio-based economy and help to replace petrochemicals and palm oil as sources of molecules for the chemical, cosmetic, and fuel industries. The strains will also facilitate sustainable production of plant-derived nutrition, flavour, and pharmaceutical products.

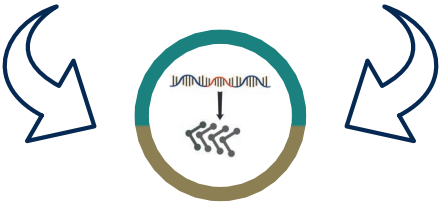
THE CHASSY PROCESS

Yeasts can produce high value products, but at low concentrations – how can yeast be made into more efficient factories?



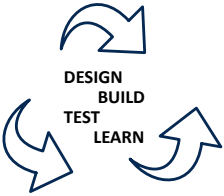
Use systems biology to understand yeast metabolic networks

Develop molecular tools to build new yeast strains



Optimise production of the key building blocks

Construct biosensors to screen for the best engineered strains



Chassis yeast that can produce diverse high value products

Transfer knowledge to European SMEs

Opportunities for Industry Partnerships

CHASSY platform strains will have optimised levels of the key metabolic building blocks for synthesising diverse oleochemicals and aromatic molecules. These strains will be tolerant of industrial processes and adaptable to the production of an array of high value compounds.

CHASSY aims to provide technological know-how and platform yeast strains to support European SMEs in the industrial biotech sector, so we are forming a CHASSY SME stakeholder group.

Stakeholders will receive information on technologies and opportunities as they arise; invitations to information and networking events; opportunities to exploit project outputs; and the possibility of forming partnerships to develop products in their own portfolios.

To join the SME stakeholder group or to learn more about partnering, email yeastresearch@ucc.ie.

CHASSY Consortium

UCC University College Cork, Ireland Coláiste na hOllscoile Corcaigh

GOETHE UNIVERSITÄT FRANKFURT AM MAIN

CHALMERS

INRA SCIENCE & IMPACT

TU Delft

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UCC ACADEMY

nova Institute for Ecology and Innovation

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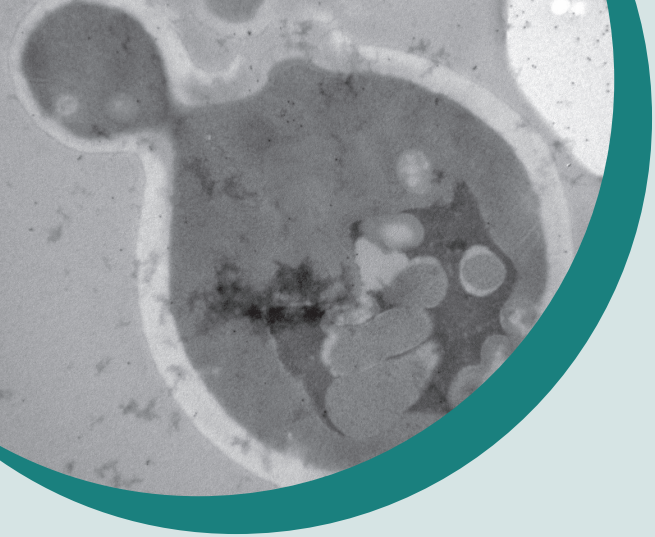

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