Consortium

YAF consists of 6 Partners (2 research centres, 3 universities and 1 pilot facility) and 6 Associated Partners (4 universities and 2 companies).

Partners

Associated Partners

www.yaf-project.eu

Yeast-based solutions for sustainable Aviation Fuels

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UK Research and Innovation

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Yeast-based solutions for sustainable Aviation Fuels

About

YAF is a Doctoral Network of the Marie Sklodowska-Curie action program (MSCA-DN GA 101120389) that will train the next generation of researchers in a highly interdisciplinary and intersectoral research environment such that they can soundly address upcoming challenges concerning production **of yeast-based Sustainable Aviation Fuels (SAF).**

Duration
01/12/2023 – 30/11/2027 (48 months)

Budget
EU: 2.637.583,20€ / UKRI: £521,352

Objetives

YAF Project aims to achieve **yeast-based solutions** for SAF by:

- Generating carbon sources from biowaste.
- Taking advantage of the outstanding capabilities of nonconventional yeast (NCY) and their recent-developed molecular biology tools.
- Designing novel catalytic processes.

Individual Research Projects

YAF counts on twelve (12) Doctoral Candidates (DCs) to undertake individual research projects in the field of biotechnology for applications in SAF.

- **2 DCs** address the generation of low-cost carbon sources from organic wastes and its further conversion into microbial oils.
- **6 DCs** utilize novel molecular biology tools to favour the production of SAF precursors in different NYC species.
- **2 DCs** study novel catalysis and new selective catalytic reaction for conversion of fatty acids and terpenes into SAF.
- **1 DC** addresses the production of SAF precursors at industrial relevant environment including sustainable recovery and downstream processes.
- **1 DC** models, optimizes and performs sustainability assessments of alternative systems for SAF production from wastes.

Impact

SCIENTIFIC IMPACTS of the scientific advances resulting from YAF will be of great importance to move forward to a sustainable energy economy. Yeast systems might be key enablers to drive the transition towards a decarbonized society, by integration of renewable and clean energy technologies.

At present, production cost of SAF is 4 times higher than that for kerosene. By biowastes, the economy of the SAF production process will be significantly reduced, thus **ECONOMIC IMPACTS** of YAF are clear.

YAF can contribute to reducing the cost of the feedstock for SAF but also greenhouse gases emissions, which is in fact of paramount importance for society welfare. YAF will help formulating EU-wide missions that can help coordinating efforts and steer innovation towards solving European societal challenges. **SOCIAL IMPACTS** and benefits will be studied to evalua-te the social consequences of SAF, compared to current jetfuels