



FKITMCMXIX

Sveučilište u Zagrebu
Fakultet kemijskog
inženjerstva i tehnologije



RADICALZ "Rapid discovery and development of enzymes for novel and greener consumer products"

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Pregled natječaja

- Poziv: FNR-16-2020
- Tema: Enzymes for more environment-friendly consumer products
- Tip akcije: RIA (100% financiranje)
- Dvije faze prijave
- Prva faza: 22/01/2020 17:00
- Druga faza 2: 08/09/2020 17:00
- Više informacija: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/fnr-16-2020>

General information

Programme

[Horizon 2020 Framework Programme](#)

Work programme part


[Food security, sustainable agriculture and forestry, marine, maritime and inland water research and the bioeconomy](#)

Call

[Food and Natural Resources \(H2020-FNR-2020\)](#)

Work programme year

H2020-2018-2020

 See budget overview

Type of action

RIA Research and Innovation action

Closed

Deadline model

two-stage

Opening date

15 October 2019

Deadline dates

23 January 2020 17:00:00 Brussels time
08 September 2020 17:00:00 Brussels time

Kako do konzorcija?

- Poznanstva
- Ranija pozitivna iskustva u radu s nekim od partnera



Naši raniji kontakti

- Mobilnosti: COST, bilaterale, ERA-net-ovi, studijski boravci, konferencije
- Svaki partner dovodi nekoga za koga može jamčiti
- Nepoznavanje partnera je velik rizik za projekt u svakom koraku: od prijave do provedbe

Priprema projekta

- Slaganje konzorcija
- Komunikacija s potencijalnim partnerima koja proizlazi iz poznanstava
- Izlazak iz zone ugone svakog od nas
- Radni sastanci putem Zoom-a
- Rasprave o tekstu natječaja – detaljna analiza teksta (svake riječi) i ‘naši’ odgovori (Challenge/Scope/Impact)

Grant	Enzymes for more environment-friendly consumer products		
Closed			
Programme	Horizon 2020 Framework Programme (H2020 - 2014-2020)	Deadline model	two-stage
ID	FNR-16-2020	Opening date	15 October 2019
Types of action	Research and Innovation action	First stage deadline	23 January 2020 17:00:00 Brussels time
		Second stage deadline	08 September 2020 17:00:00 Brussels time

Tekst natječaja

Topic description

Specific Challenge:

It has been demonstrated that the unique selectivity and catalytic activity of enzymes gives them significant potential to support sustainability, reduce environmental pollution, lower processing costs and enhance product performance and functionalities. Growing environmental concerns have contributed to the rapid growth in the market for enzymes and their use in various industrial and speciality applications. Enzymes find application in the processing phase and in the formulation of consumer products such as washing agents, textiles, personal care, cosmetics or nutraceuticals.

The specific challenge is to expand the use of enzymes to respond to the steadily growing demand for greener consumer products, combining economic competitiveness and greater sustainability.

Scope:

Proposals should address the development of novel or improved enzyme(s) for the processing and/or the formulation of one or more of the following consumer products: washing agents, textiles, personal care products, cosmetics and nutraceuticals. The approach could involve bioprospecting or the exploitation of existing databases. Activities should include assessment of the environmental impact of the developed approach. They should aim at a strong improvement of environmental performance, against the state of the art, linked to enzyme functionality. In line with the principles of Responsible Research and Innovation, close research collaboration with all relevant stakeholders is needed to ensure future industrial implementation and market uptake.

Proposals should:

- involve the development of an efficient production system of the enzyme(s) in question, together with downstream processes and methods for enzyme formulation and inclusion in the consumer product(s);
- (where they concern the development of enzyme-containing consumer products) cover the management of safety aspects, including appropriate risk assessment;
- combine the development of the targeted enzyme(s) with the development of generic platform technologies with a view to faster transition from lab to market. This should be based on an interdisciplinary approach and could involve: novel technologies and methods such as the screening, design, creation or optimisation of novel high-performance enzymes as well as computational methods and tools for effective big-data analysis.

Cooperation with other selected proposals under this topic is encouraged.

The Commission considers that proposals requesting an EU contribution of around EUR 6 million would allow this specific challenge to be addressed appropriately. This does not preclude the submission and selection of proposals requesting other amounts.

Expected Impact:

short/medium term

- broaden the range of enzymes used in the production or formulation of consumer products;
- reduce the environmental impact of those consumer products;
- improve the overall sustainability and innovation capacity of the bio-based sector through the use of innovative enzymes;
- develop strategies to speed up the transition from lab to market for the development of enzyme-based innovation, on the basis of closer and interdisciplinary cooperation;
- deliver results in a form that allows for efficient feedback into policymaking in research, innovation and technology, in particular in the 2018 EU bioeconomy strategy;
- raise awareness and create a better framework for systemic innovation and uptake through broad stakeholder engagement; and

medium/long term

- enhance the competitiveness and sustainability of European industry, including the biotechnology and consumer products sectors. Cross-cutting Priorities:

Priprema projekta

- Preporuka: uključivanje u bazu evaluatora EU projekata
- Iskustvo evaluacije pridonosi boljem razumijevanju teksta natječaja i drugačijem kutu sagledavanja onoga što ocjenjuju evaluatori

Priprema projekta

- Komunikacija s nacionalnim kontakt osobama
- Raspodjela zaduženja/poslova među partnerima
- Hodogram aktivnosti – poštivanje vremenskih rokova
- Dobra organizacija aktivnosti
- Uravnotežen konzorcij (države, sveučilišta, institute, industrijski partneri, mali i srednji poduzetnici)

Osnovni podaci o projektu

Project Information

RADICALZ

Grant agreement ID: 101000560

Start date

1 June 2021

End date

31 May 2025

Funded under

H2020-EU.3.2.4.2.

Overall budget

€ 6 004 308,91


EU contribution

€ 6 004 308,75



Coordinated by

UNIVERSIDAD AUTONOMA DE MADRID

 Spain

- 12 partnera iz 9 država





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■ Partneri

Sort alphabetically ▾

Sort by EU Contribution ▾

Expand all

	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE 🇨🇭 Switzerland	EU contribution € 395 000	▾
	SVEUCILISTE U ZAGREBU FAKULTET KEMIJSKOG INZENJERSTVA I TEHNOLOGIJE 🇨🇷 Croatia	EU contribution € 487 095	▾
	SUSTAINABLE MOMENTUM SL 🇪🇸 Spain	EU contribution € 192 750	▾
	SCIENSEED SL 🇪🇸 Spain	EU contribution € 225 187,50	▾
	THE UNIVERSITY OF EXETER 🇬🇧 United Kingdom	EU contribution € 737 386,25	▾
	INSTITUT NATIONAL DES SCIENCES APPLIQUEES DE TOULOUSE 🇫🇷 France	EU contribution € 524 935	▾
	BIO-PRODUCT BV 🇳🇱 Netherlands	EU contribution € 686 815	▾
	BIOTECHNOLOGY RESEARCH AND INFORMATION NETWORK AG 🇩🇪 Germany	EU contribution € 527 450	▾
	UNIVERSITAET GREIFSWALD 🇩🇪 Germany	EU contribution € 550 468,75	▾
	ANALYTICON DISCOVERY GMBH 🇩🇪 Germany	EU contribution € 474 052,50	▾
	CHR. HANSEN A/S 🇩🇰 Denmark	EU contribution € 425 755	▾

Objective

The application of enzymes in industrial processes is increasingly important to achieve the EU's sustainability goals and strengthen the bioeconomy, replacing oil-based chemistry. However, enzymes still find hurdles for their industrial application: low success rates of discovery and engineering; tedious and expensive methods to explore diversity; and limited activity/stability in the final application. RADICALZ assembles an interdisciplinary and intersectoral consortium to deliver faster, more versatile and more affordable tools for enzyme discovery and engineering, enabling the development of novel enzymes, new formulations and ingredients for more environment-friendly and healthier consumer products. This project will: i) develop new droplet microfluidic tools to find suitable enzymes for consumer products; ii) develop user-friendly software solutions based on machine learning (ML) for faster and more accurate enzyme engineering; iii) develop novel enzymes and bio-based, bio-catalytically synthesized ingredients for consumer products (glycosides, wash-enhancing enzymes, bio-based thickeners, natural antioxidants and fragrances); iv) develop bio-based, condition-responsive capsules for the protection and triggered release of enzymes and ingredients in the formulation of consumer products. RADICALZ will reduce the average time for enzyme discovery and evolution to <4 weeks, access 10 bio-based ingredients to replace oil-based chemistry, reducing the environmental impact –supported in depth in ≥ 3 cases– across 3 different types of consumer products. RADICALZ assembles 6 leading European companies and 6 pioneer academic teams expert in enzyme discovery and evolution, biocatalysis, chemical engineering, microbiology, soft-matter physics and microfluidics. The planned activities span 48 months and 7 work packages. The project is estimated at ca. 6 M€ (42% allocated to industrial partners and 64% of the total dedicated to creating highly-qualified jobs).

Fields of science

natural sciences > biological sciences > biochemistry > biomolecules > proteins > **enzymes**

engineering and technology > **chemical engineering**

natural sciences > physical sciences > classical mechanics > fluid mechanics > **microfluidics**

Hvala Vam na pažnji