

Project partners:

1. A4F, Algafuel, SA (A4F)
2. Mikrobiologicky Ustav AV CR V.V.I (IMIC)
3. Forfarmers Corporate Services BV (FF)
4. Instituto de Biologia Experimental e Tecnológica (IBET)
5. International Flavors and Fragrances IFF (Nederland) BV (IFF)
6. Laboratorio Nacional de Energia e Geologia I.P. (LNEG)
7. Phycom BV (PHY)
8. Upfield Research and Development B.V. (UPF)

MULTI-STR3AM

A sustainable multi-strain, multi-method, multi-product microalgae biorefinery integrating industrial side streams to create high-value products for food, feed and fragrance

BBI-2019-SO1-D2 - Produce components for various materials, including for food and feed, from microalgae

Collaborative project

Start date of the project: 01/05/2020

Duration: 48 months

Deliverable 6.14

Press Release 3

WP	6	Communication and dissemination
Task	6.3	Production and dissemination of a communication materials package (M1-M48)

Dissemination level ¹	PU	Due delivery date	30/04/2023
Nature ²	DEC	Actual delivery date	26/04/203

Lead beneficiary	A4F
Contributing beneficiaries	-

¹ Dissemination level: **PU** = Public, **CO** = Confidential, only for members of the consortium (including the BBI), **CI** = Classified, information as referred to in Commission Decision 2001/844/EC.

² Nature of the deliverable: **R**: Document, report (excluding the periodic and final reports), **DEM**: Demonstrator, pilot, prototype, plan designs, **DEC**: Websites, patents filing, press & media actions, videos, etc., **OTHER**: Software, technical diagram, etc.

WP 6:	A4F	Author
	A4F	Approval by WP leader
	A4F	Approval by coordinator

Document Version	Date	Partner	Comments ³
V0	03/03/2023	A4F	Creation
V1	24/04/2023	A4F	Modification
V2	26/04/2023	A4F	Final Version

³ Creation, modification, final version for evaluation, revised version following evaluation, final

Deliverable abstract

This delivery corresponds to the annual press release comprising achievements in the project during year 3 (May 2022, April 2023).

Linked to task 6.3, “Production and dissemination of a communication materials package”, this delivery aims to inform the public and all interested stakeholders about the ongoing work developed by MULTI-STR3AM consortium.

A press release consists of newsworthy information to the press or journalists. For this press release, the MULTI-STR3AM consortium chose to communicate the first year of operations within the MULTI-STR3AM biorefinery, explaining how the biorefinery is being implemented by A4F and the main fractions that are currently being produced.

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1 Objective of the press release 3

This annual press release aims to communicate the challenges and scientific and technological achievements in the project during year 3, from May 2022 to April 2023.

The press release 3 is entitled “First year of operations of the MULTI-STR3AM biorefinery”, being published on 26th April 2023. This press release highlights the implementation process of the MULTI-STR3AM biorefinery, revitalizing old installations with all the necessary unit operations for the use of diverse species of microalgae and generation of several high-value ingredients. The press release also gives notice to the first year of operations and the produced microalgae fractions that have been distributed to the end-users for the assessment of their potential in food, feed and fragrance applications.

With this scenario, the strategy of the fifth press release was to communicate, to the media and important stakeholders, the progresses of the project towards the development of a sustainable biorefinery for microalgae, with a cascade approach to maximize the value of all biomass fractions.

This communication piece was shared with all partners and their communication departments, disclosed at the project website and partners social networks.

2 Press release content

First year of operations of the MULTI-STR3AM biorefinery

The MULTI-STR3AM project, which aims to develop a sustainable biorefinery for microalgae-based food, feed and fragrance products, has completed the first year of operations at its biorefinery in Portugal.

A4F - Algae for Future, the coordinator of this ambitious project, is implementing a multi-method biorefinery that integrates different species of microalgae and industrial side streams to produce valuable ingredients. This sustainable approach to food and feed production using microalgae will help the EU industry to overcome the challenges of scalability and pricing.

Implementation of the MULTI-STR3AM biorefinery

The construction of the MULTI-STR3AM biorefinery contemplated the retro-fitting of an abandoned industrial site, revitalizing old installations into a sustainable biorefinery for the future. The MULTI-STR3AM biorefinery is designed with all the necessary unit operations for the use of diverse species of microalgae and generation of several high-value ingredients. By using different biomass feedstocks and integrating industrial waste streams provided by the production units, the biorefinery offers a zero-waste approach to operations. A4F is currently developing integrative processes at the site to ensure economic viability.

Microalgae produced fractions

During the first year of operations, the MULTI-STR3AM biorefinery produced different types of microalgae disrupted biomass fractions: carotenoid extracts (with 3.8% of carotenoids), protein extracts (with more than 85% of protein and 27% of phycocyanin), omega-3 lipids (with 14% of EPA in DW), and the protein and carbohydrate fraction (with 44% of bulk-protein and 44% of carbohydrates). These fractions have been analysed by the end-users in the food, feed and fragrance industries for their potential as final products. UpField, ForFarmers, and iFF have all found value in these fractions, validating the MULTI-STR3AM concept of using a biorefinery cascade approach to maximize the value of all biomass fractions.

The Bio-based Industries Joint Undertaking's project MULTI-STR3AM addresses the challenges of scale of microalgae-based products by integrating sustainable multi-strain, multi-method and multi-product microalgae biorefinery in industrial side streams. This EU-funded project is designed to help close the gap between research and industrial scale on microalgae cultivation.

The MULTI-STR3AM project is coordinated by A4F – Algae for Future (PT), and brings together the companies ForFarmers (NL), International Flavors & Fragrances (IFF, NL), Phycom (NL), UpField (NL), and the R&D institutions IMIC CAS - Centre Algatech (CZ), Instituto de Biologia Experimental e Tecnológica (iBET, PT), and Laboratório Nacional de Energia e Geologia (LNEG, PT).

More information: www.multi-str3am.com

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3 Final version



Press Release

First year of operations of the MULTI-STR3AM biorefinery

Lisbon, April 26th, 2023

The MULTI-STR3AM project, which aims to develop a sustainable biorefinery for microalgae-based food, feed and fragrance products, has completed the first year of operations at its biorefinery in Portugal. A4F - Algae for Future, the coordinator of this ambitious project, is implementing a multi-method biorefinery that integrates different species of microalgae and industrial side streams to produce valuable ingredients. This sustainable approach to food and feed production using microalgae will help the EU industry to overcome the challenges of scalability and pricing.

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More information: www.multi-str3am.com

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