

AGREEMENT ON PARTICIPATION IN THE GRANT PROJECT AND ON THE USE OF THE RESULTS

Contract number: 20240301-01

AVEFLOR, a.s.

with registered office at: Budčeves 26, 507 32 Budčeves

ID: 64259838

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Represented by: Ing. Jan Zubatý, Vice-Chairman of the Board of Directors

Registered in the Commercial Register of the Czech Republic under No.: B 1284, registered at the Regional Court in Hradec Králové

Bank account: ČSOB, a.s. , *account no.:* 197781946/0300

Responsible person: [REDACTED]

as beneficiary of the project

hereinafter as "**Aveflor**" or the "**Beneficiary**"

and

Mikrobiologický ústav AV ČR, v. v. i.,

with registered office at: Vídeňská 1083, 142 00 Prague 4 - Krč, Czech Republic

ID: 61388971

VAT ID: CZ61388971

Represented by: Ing. Jiří Hašek, CSc., Director

Registered in the Register of Public Research Institutions of the Ministry of Education, Youth and Sports of the Czech Republic

Bank account: Komerční banka a.s., Prague 1 , *account no.:* 2246660227/0100

Responsible person: [REDACTED].

as another participant in the project,

hereinafter as "**MBU**" or "**the Other Participant**"

and

TWBIO, Trade Wind Biotech Co., Ltd.,

with registered office at: 17F.-10, No. 508, Sec. 7, Zhongxiao E. Rd. Nangang Dist., Taipei City 115011, Taiwan (R.O.C.)

ID: Not set

VAT ID: 52218090

Represented by: Dr. Lance Chang, Ph.D., CEO of TWBIO

Registered in: the Taipei City Government (Municipal Government of Taipei)

Bank account: Not set

Responsible person: [REDACTED]

as another participant in the project,

hereinafter as "**TWBIO**" or "**the Other Participant**"

collectively as "**Parties**"

enter, on the basis of the results of the fifth public tender DELTA 2 announced by the Technology Agency of the Czech Republic pursuant to Act No. 130/2002 Coll., on the Support of Research and Development from Public Funds (hereinafter as "**Act No. 130/2002 Coll.**"), into this Agreement on Participation in the Grant Project and on the Use of the Results (hereinafter referred to as "**Agreement**", "**Project**" and "**Provider**").

I. Subject of this Agreement

1. The subject of this Agreement is to establish the terms and conditions for the implementation of part of the grant project specified below.
2. Identification of the Project:

Title:	Sequential bio-manufacturing based on countercurrent separation to obtain astaxanthin from probiotic yeast
Project registration number:	TM05000008

II. Project Implementation

Launch Date:	01/2024
Termination Date:	06/2025
Subject:	Use of countercurrent separation to obtain astaxanthin from probiotic yeast
Objective of the Project:	The project aims to develop sequential production of astaxanthin from yeast, with a focus on supplying multiple markets. It includes a breakthrough yeast-based probiotic cell factory and an extraction system for astaxanthin-rich yeast biomass extracts. Our research focuses on an efficient sequential separation process using countercurrent separation (CCS) to isolate astaxanthin from yeast biomass extract. We will also develop an advanced membrane system to increase the purity of astaxanthin for the demanding market and explore its innovative application as a plant-based meat coloring agent. By integrating these advances, our project provides a sustainable industry for various industry needs while creating new opportunities in the astaxanthin market.
Expected Results:	See Annex 1 to this Agreement
Principle Investigator:	██
Co-investigator:	██ ██

Part of the Project conducted by the Other Participant:	See Annex 1 to this Agreement hereinafter as " Part of the Project "
Responsible person for the management of the Project:	Beneficiary

III. Cooperation between the Parties

1. To meet the objectives outlined in the Agreement, all Parties agree to collaborate. This involves ensuring the participation of the Principle investigator, Co-investigagor and other authorised persons as specified in the Project in carrying out the Project. A summary of the Project and its expected results (hereinafter "**Results**") are outlined in Annex 1 to this Agreement. Additionally, any outcomes achieved during the implementation of the Project that go beyond the scope outlined in Annex 1 to this Agreement will also be considered as part of the Project's Results.
2. The Parties commit themselves to provide the following:
 - a. The Beneficiary shall supply a technological production line based on countercurrent separation for refining yeast biomass into marketable bioactive astaxanthin, including solvent recycling.
 - b. MBU shall develop a production process based on countercurrent separation for refining yeast biomass into marketable bio-based astaxanthin.
 - c. TWBIO will provide production of yeast biomass rich in astaxanthin, final purification of astaxanthin using membrane technology and its application in vegetable meat.

IV. Financing of the Project

1. The Parties acknowledge that TWBIO should have received the amount equivalent to CZK 6.737.286 from the Ministry of Economic Affairs of Taiwan (MoEA), as originally requested, but MoEA has adjusted its support to CZK 4.922.225.
2. The Beneficiary shall transfer a part of the dedicated funds from the Provider in the amount of **CZK 1.675.996** to the bank account of MBU in two instalments: CZK 1.192.512 in 2024 and CZK 483.484 in 2025 (hereinafter the "**Allocated Funds**").
3. The Beneficiary shall transfer the Allocated Funds within 30 days of receiving the funds from the Provider, unless the Provider's Rules (hereinafter as the "**Provider's Rules**") stipulate a shorter time frame.
4. If the Provider decides to allocate a different amount for the Project's implementation than specified in the Project proposal, the Parties agree to adjust the Allocated Funds through an amendment to this Agreement.
5. The Allocated Funds are exempt from VAT.
6. The Allocated Funds are provided by the Beneficiary to MBU to cover actual costs directly associated with achieving the objectives and parameters of the implemented Part of the Project, as stipulated in this Agreement, the agreement between the Beneficiary and the Provider, and the applicable legal regulations.
7. The Parties agree that their financial contributions to the Project's implementation are:
 - a. CZK 366.880 by the Beneficiary,
 - b. CZK 367.001 by MBU and

- c. CZK 10.105.929 by TWBIO (as originally set), but due to a readjustment of support by MoEA, the contribution of TWBIO was set at CZK 7.486.745.

V. Conditions of Use of the Allocated Funds

1. MBU is obliged to:
 - a. Use the Allocated Funds solely for the payment of provable and necessary expenses directly linked to achieving the objectives and parameters of the implemented Part of the Project. This use should comply with the Provider's Rules and applicable legal regulations.
 - b. Maintain an accounting record detailing the use of the Allocated Funds. This record should separate the Allocated Funds from the remaining assets of MBU. The obligation to maintain this record extends for a period of 10 years from the provision of the Allocated Funds. While maintaining this accounting record, MBU shall comply with the applicable legal regulations, the Provider's Rules, standard accounting practices, and any pertinent conditions specified in principles, instructions, guidelines, or other regulations issued in the Financial Bulletin of the Ministry of Finance of the Czech Republic or in similar binding documents.
 - c. Ensure timely attainment of the objectives and parameters of the Project in accordance with both the Provider's Rules and the Project documentation.
 - d. Maintain the designated ratio between expenses covered by special-purpose funds allocated from the Czech state budget and other specified forms of financing the Part of the Project.
 - e. Provide the Beneficiary with a written annual report on the implementation of the Part of the Project and the annual financial statement no later than 20 calendar days before the deadline for submitting the Beneficiary's annual report to the Provider. This report shall comply with the Provider's Rules and must include a detailed breakdown of how the funds were managed. The Beneficiary has the right to review these documents and, within 5 working days of receiving them, can request MBU to rectify any defects. MBU must rectify the defects, or provide reasons for not doing so, within 5 working days. MBU is responsible for ensuring the accuracy and completeness of these documents and for delivering them to the Beneficiary. The same procedure applies if any other documents need to be provided to the Provider according to the Provider's Rules or if requested by the Provider or any relevant public administration body. If the time limit for submitting the documents set for the Beneficiary is shorter than 20 days, MBU's time limit shall be $\frac{1}{4}$ of the Beneficiary's deadline.
 - f. Return the unused part of the Allocated Funds in accordance with the agreement between the Beneficiary and the Provider, the Provider's decisions and the applicable legal regulations.
 - g. If the obligation to return the Allocated Funds arises for reasons other than a foreseen financial settlement, promptly ask the Beneficiary in writing for instructions on how to settle these funds.
 - h. To facilitate an inspection by the Provider and/or the Beneficiary (or their authorised representatives) of the Results and the accounting records for the Allocated Funds at any time during the Project's duration or within 10 years from receiving the last part of the Allocated Funds. This provision shall not be construed so as to limit the powers of the Czech Republic's control and financial authorities.
 - i. Manage the Allocated Funds, and the assets acquired for these funds, in compliance with the applicable legal regulations concerning the management of the Czech Republic's state

property (such as Act No. 134/2016 Coll., the Public Procurement Act, and Act No. 218/2000 Coll., the Budget Rules Act).

- j. Comply with any other obligations outlined in Article 4 of the Provider's General Terms and Conditions, as amended.
2. If, during the relevant calendar year, MBU does use up all the Allocated Funds provided by the Beneficiary for that period, MBU has the right to use up to 5% of the total amount provided for that period in the subsequent year; this does not apply in the final year of the Project's duration.

VI. Rights to Tangible Assets

1. The Party that acquires or creates tangible assets necessary for the Project's implementation using Allocated Funds becomes the owner of those assets. If the Parties jointly acquire or create these assets, they share ownership equally unless they agree otherwise.
2. The Other Participant shall not dispose of the tangible assets acquired directly in connection with fulfilling the Project's objectives using Allocated Funds without the prior written consent of the Beneficiary. This restriction applies until all obligations arising from this Agreement for the Other Participant are fully settled.
3. The Parties agree to provide each other with the necessary equipment for the Project implementation. Specifically, the Beneficiary shall supply a technological production line based on countercurrent separation for refining yeast biomass into salable bioactive astaxanthin, including solvent recycling.

VII. The Protection of Intellectual Property

1. The Parties mutually agree that all information related to the Project implementation (including the Project proposal, the Parties' Background IP, the Results or components thereof) shall be treated as confidential, unless expressly agreed otherwise. Any technical or commercial information shared by one Party (hereinafter the "**Discloser**") with another Party (hereinafter the "**Recipient**") regarding the Project shall be considered confidential unless explicitly stated otherwise by the Discloser. The Recipient commits to exercising due care to maintain the confidentiality of all such information and not to disclose it to third parties without the prior written consent of the Discloser. Access to confidential information shall be limited to workers of the Recipient and its contractors who need it for the Implementation of the Project, and only to the extent necessary for this purpose. The duty of confidentiality does not apply to any information that:
 - a. is publicly available at time of its disclosure to the Recipient;
 - b. is published or made publicly available after having been disclosed to the Recipient, and not by any breach of contract by the Recipient;
 - c. the Discloser approved for publication by the Recipient;
 - d. was already known to the Recipient before its disclosure by the Discloser, provided that the Recipient was not at that time bound by a duty of confidentiality;
 - e. must be submitted to the Provider or control authorities in connection with the provided funds or to the Register of Information on Results of the Czech Republic (RIV)
 - f. is requested by a court or by an authority responsible for criminal proceedings or other public authority in accordance with the law, provided that the Confidential Information is disclosed only to the extent necessary to comply with the law.
2. Background intellectual property:

- a. The Parties own or are entitled to use at the outset of the Project the skills, know-how, and other intellectual property rights necessary for its Implementation (hereinafter the "**Background IP**") as listed in Annex 1 to this Agreement.
 - b. Any Background IP existing as of the date of this Agreement's execution remains the property of the Party that provided it for the Project, or as the case may be, the relevant third party.
 - c. Each Party hereby grants the other Party a free, non-exclusive licence, without the right to sublicense, to use its Background IP for the purpose of performing this Agreement. Outside the scope of this Agreement, as well as after termination or expiration of the Agreement, and except as explicitly agreed otherwise, the Parties shall refrain from using, applying or transferring Background IP of the other Party.
 - d. The Parties have the right to obtain a licence for the market value to the Background IP owned by another Party if such licence is necessary for utilising the Results. This necessity arises when the use of the Results would be technically or legally challenging or impossible without such Background IP.
 - e. The Parties acknowledge that they use the Background IP of the other Party at their own risk. They understand that the Background IP is provided without any guarantee, in particular concerning its accuracy, correctness, and suitability for a specific purpose. The Party utilising the Background IP of another Party bears full responsibility for any potential infringement of third-party intellectual property rights.
3. Each Party shall ensure that it obtains all proprietary rights of employees, volunteers, interns, students and any other third parties taking part in the Project on its behalf.

VIII. Rights to the Results

1. The Parties shall organise a joint meeting at least once every quarter (every 3 months) to update each other on the Project's progress. If any Results were produced during the previous period, the Parties will establish who is the inventor (the author) and the owner according to the rules outlined in Article VIII, para. 2 of this Agreement. The Parties shall take minutes from the meeting.
2. Rights to the Results:
 - a. The Results achieved within the Project by only one Party will be fully owned by the Party that developed them through their own creative work.
 - b. The Results achieved within the Project by two or more Parties together, where individual creative contributions cannot be easily separated (hereinafter "**Joint Results**"), will be jointly owned by the Parties. The shares of the Parties will be determined based on their contributions to achieving the Joint Result, in accordance with the applicable legislation, including public aid rules. If the Parties fail to agree on the share of a Joint Result within 120 days of its creation, ownership will be allocated according to the ratio specified in Annex 1 to this Agreement. If the Joint Result is not listed in Annex 1 to this Agreement, the default ratio will be: Beneficiary 33,3 %, MBU 33,3 % and TWBIO 33,3 %. In case of a dispute, either Party may request that the Parties' contributions be determined by an independent expert in the field.
 - c. The owner of the Results is responsible for designing and implementing appropriate protection for the intellectual property contained in the Results, at their own expense and risk. Intellectual property protection primarily involves filing domestic and/or foreign applications for patents, utility models, and industrial designs, or securing copyright protection.

- d. If the Result is jointly owned by the Parties and if they deem it appropriate, they may apply for the intellectual property protection together, ensuring that all relevant Parties become co-owners of the relevant protection.
 - e. The Parties' respective shares in the Joint Result correspond to their shares in the associated rights and obligations, including obligations to cover the costs related to registering industrial rights and maintaining industrial rights, and rights to revenues from licences.
 - f. The Parties agree that all decisions regarding legal actions concerning the Joint Result will be made jointly through mutual agreement of the involved Parties, unless specified otherwise. Transfer of intellectual property rights to the Joint Result or the transfer of shares related to the Joint Result is only possible with the consent of the other involved Parties.
3. The Parties will conclude a separate agreement on the use of the Results as soon after the Result's creation as possible or reasonable. Unless agreed otherwise, it will be as follows:
 - a. Any Party has the right to obtain a non-exclusive licence for the market value to the Results owned by the other Party, if such licence is necessary for utilising the Results owned by that Party.
 - b. Each Party has the right to independently utilise the Results for non-commercial purposes, including research, scientific, publication and educational activities. However, this use must ensure that the Results are not disclosed prior to filing for intellectual property protection, that confidential information is protected, and that the intellectual property rights of the other Parties are not jeopardised.
 - c. Each co-owner of the Joint Result has the right to independently take legal action in cases of evident violation of the intellectual property rights.
4. Any oral or written publication of information related to the Results (e.g. scientific publications or conference presentations) must be approved by all Parties. If the Party intending to publish does not receive a written objection, request for modification, or other comments preventing the publication within 30 days of sending the proposal to the other Parties, it is assumed that the other Parties have agreed to the publication. The Parties agree not to unreasonably withhold consent to publication.
5. When deciding over the rights to the Results, the Parties agree to comply with the regulations governing public aid, as outlined in Article 107 of the Treaty on the Functioning of the EU and the Framework for State aid for research and development and innovation (Communication from the Commission no. 2022/C 414/01).
6. Unless otherwise agreed in writing, the provisions of this article shall also apply mutatis mutandis to claims to the Results of the Project in the event of an early termination of the Agreement.
7. The Other Participant agrees to cooperate with the Beneficiary in preparing the implementation plan for the Results and in preparing implementation reports. When using the Results or disposing with rights to them, the Parties shall act in accordance with the implementation plan and while following the market conditions. For the avoidance of doubt the Parties declare that this Agreement does not transfer any rights to the Results.

IX. Liability and Penalties

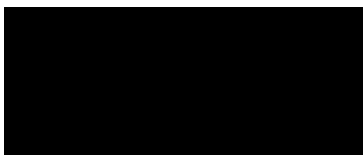
1. The Parties acknowledge that any misuse or abuse of grant funds, contrary to their intended purpose as outlined in this Agreement and/or the agreement of the Beneficiary with the Provider, constitutes a breach of budget discipline under § 44 et seq. of Act No. 218/2000 Coll., on Budgetary Rules, and Article 5 of the General Terms and Conditions of the Provider.

2. If a Party evidently violates any obligations under this Agreement or the Provider's rules, or if a final and effective decision of the Provider or another public authority declares such violation, that Party shall compensate the other Parties for any resulting damage. The Beneficiary is entitled to compensation for contractual fines, refunds of the Allocated Funds and other penalties applied by the Provider due to the Other Participant's breach of duty. The Parties must cooperate to minimise such damages.
3. No Party may transfer the obligations arising from this Agreement to a third party without the written consent of the other Parties and without prior approval from the Provider.

X. Final Provisions

1. The Other Participant unconditionally agrees to comply with the Agreement on the Provision of Funds for Project Implementation concluded between the Provider and the Beneficiary, along with all its annexes. Additionally, the Other Participant must cooperate with the Beneficiary to fulfil the obligations arising from the Provider's Rules.
2. Rights and obligations not explicitly addressed in this Agreement are governed by Act No. 89/2012 Coll., the Civil Code, and other relevant laws, such as Act No. 130/2002 Coll.
3. Any amendments to this Agreement must be made in writing; amendments made in any other form are invalid.
4. This Agreement comes into effect from the start date of the Project's implementation or from the Agreement's publication in the Register of Contracts (whichever is later). It remains valid until the completion of the Project and the settlement of all related obligations of the Parties (except for Articles VII and VIII, which survive termination of this Agreement). If the Provider fails to grant and provide funds for the Project's implementation, resulting in the Project not commencing, this Agreement will not become effective, and its validity will automatically cease on the date of publication of the decision or notification from the Provider indicating the non-award of funds.
5. A Party has the right to terminate this Agreement. In such an event, the notice period is 2 months, commencing on the first day of the month following the delivery of the notice to the other Parties. The notice must be in writing; otherwise, it is considered invalid. The termination's full effects are subject to the terminating Party settling its obligations with the Provider.
6. The Parties acknowledge that this Agreement is subject to obligatory publication under the Czech Act No. 340/2015 Coll., on Special Conditions of Effect of certain Contracts, Publication of these Contracts and on the Register of Contracts (Act on the Register of Contracts) and shall become legally binding upon MBU only upon such publication in the Register of Contracts. The Parties have agreed that prior to publication of this Agreement, MBU will remove (black out) any and all provisions of this Agreement designated by the Parties as personal data or trade secrets and provide the redacted Agreement to the other Parties for approval. MBU will take care of the publication.
7. This Agreement is executed in three (3) counterparts, each with the validity of the original. Each Party will receive one.
8. This Agreement constitutes the entire agreement of the Parties and supersedes all prior representations, understandings, undertakings or agreements (whether oral or written and whether expressed or implied) of the Parties with respect to the subject matter hereof. No statements made by the Parties during negotiations or after the conclusion of this Agreement shall be interpreted as conflicting with the Agreement's provisions or imposing obligations on any Party.
9. The Parties declare that they have read the Agreement, understand its content, agree with it in full and desire to be bound by it.

AVEFLOR, a.s.



In Budčeves, on

.....
Ing. Jan Zubatý
Vice-Chairman of the Board of Directors

Mikrobiologický ústav AV ČR, v. v. i.

In Prague, on

.....
Ing. Jiří Hašek, CSc.
Director

TWBIO, Trade Wind Biotech Co. Ltd

In Taipei, on

.....
Dr. Lance Chang
CEO of TWBIO

ANNEX 1

BRIEF DESCRIPTION OF THE PROJECT, EXPECTED RESULTS (FOREGROUND IP) AND BACKGROUND IP

PROJECT DESCRIPTION

Name of the Project:

Sequential bio-manufacturing based on countercurrent separation to obtain astaxanthin from probiotic yeast.

Brief project description:

The global market for astaxanthin, considered the most potent naturally occurring carotenoid antioxidant, is expected to reach \$6.90 billion by 2030. Although astaxanthin occurs naturally, the global market is currently dominated by synthetic astaxanthin. However, recent market shifts toward the use of natural ingredients have led to the increasing use of algae and yeast as astaxanthin sources, resulting in exponential growth of the natural astaxanthin market. While microalgae serve as a source of astaxanthin, selective extraction of this pigment is challenging because it exists in several variants with different polarities. In contrast, yeast contains astaxanthin in a single chemical form, making isolation less complicated. In addition, yeast exhibits high astaxanthin yield and productivity, making it a promising choice for the expansion and commercialization of astaxanthin production. However, efficient extraction of astaxanthin from the yeast cell matrix remains a major challenge on the road to commercialization. Existing methods for separating astaxanthin from biomass require complex and costly purification procedures, which limits their applicability on an industrial scale.

To overcome this challenge, this project will develop a sequential production system based on countercurrent separation (CCS) to obtain astaxanthin from extract of biomass of probiotic yeast. By targeting the metabolism of yeast cells, an improved yeast strain with high astaxanthin yield will be used to obtain enriched biomass through efficient yeast culture. Astaxanthin will be recovered from biomass by innovative membrane filtration technology. [REDACTED]

[REDACTED]. The process will be designed to be efficient, automated, scalable, cost effective, flexible, high throughput and in compliance with international regulations. The proposed project will lead to the creation of a new bio-based value chain for the production of astaxanthin from yeast with direct applications in food, beverages, dietary supplements, feed, pharmaceuticals and cosmetics.

Project partners:

Partner 1: Aveflor, a.s. – managing partner

Functional sample - TM05000008-V10

Output 2.2

Research paper

Expected IP ownership

[REDACTED]

Deliverable

Scientific article – not defined in the project

Result (Outcome) 3

Biphasic solvent system suitable for a manufacturing process based on countercurrent separation to obtain astaxanthin from extract of yeast biomass in compliance with international regulations.

Output 3.1

Know-how – knowledge of the solvent system for CCC separation of AXT.

Expected IP ownership

[REDACTED]

Deliverable

Not defined in the project

Result (Outcome) 4

[REDACTED]

Output 4.1

[REDACTED]

Expected IP ownership

[REDACTED]

Deliverable

Functional sample - TM05000008-V11

Result (Outcome) 5

Bioactive astaxanthin fraction

Output 5.1

Functional sample – Bioactive astaxanthin fraction (NOT IP!)

Expected IP ownership

[Redacted]

Deliverable

Functional sample - TM05000008-V9

Result (Outcome) 6

New membrane separation technology

Output 6.1

Verified Technology of a new membrane separation

Expected IP ownership

[Redacted]

Deliverable

Verified Technology - TM05000008-V8

BACKGROUND IP

IP ENTERING TO THE PROJECT

IP: Intellectual property – patents, trade marks, know-how, trade secrets, copyright, methods, skills etc.

AVEFLOR, a.s.

[Redacted]

MBU

[Redacted]



TWBIO

