

AGREEMENT ON PARTICIPATION IN THE PROJECT SOLUTION

AND ON THE USE OF RESULTS

Beneficiary's contract number: 007511/2022/00

concluded on the day, month and year below and under the following conditions by these Contracting Parties

VIA ALTA a.s.

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Registered in the Commercial Register kept at the Regional Court in Brno, Section B, Insert 6068

Represented: Ing. Jakubem Johnem, Ph.D., Chief executive officer (CEO) and Ing. Michal Kazda, Ms.C., Member of the Board

Employee responsible for the recipient (researcher): Ing. et Ing. Tomáš Ondračka hereinafter also referred to as the "**beneficiary**"

and

Vysoké učení technické v Brně

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Represented: doc. Ing. Ladislav Janíček, Ph.D., MBA, LL.M., rector

Employee responsible: Mgr. Jan Žídek, Ph.D.

hereinafter also referred to as the „another participant“ or „BUT“

and

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Represented: Assoc. Prof. Dr. Pham Thi Hong Minh, Director

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and

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and

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and

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Represented: Dr. Nguyen Quang Thai, Director

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and

Voi Trang Co Ltd - Participating Organization

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I.

Object of the contract

1. The subject of this agreement is to determine the conditions of cooperation of the contracting parties in solving a project in the field of research and development, accepted in the 3rd public tender of the Program for Support of Applied Research, Experimental Development and Innovation DELTA 2 of the Technology Agency of the Czech Republic.
2. Project identification:
Title: CHITEC - New nanotechnological equipment for the production of new nanoelectrified programmable layered structures from chitosan treated with natural substances for medical and agricultural applications
Reg. n.: TM03000061
3. Change the project name on the partner side to:
"Hợp tác nghiên cứu phát triển công nghệ và chế tạo vật liệu sợi nano đa lớp trên cơ sở chitosan mang hoạt chất dược liệu bằng thiết bị in phun sinh học 3D CHITEC nhằm ứng dụng trong chăm sóc sức khỏe và nông nghiệp"
4. The duration of the implementation was adjusted: from 24 months to 30 months to allow enough time to complete the research content.

II. Project solution

1. The project solution is spread over the period from 03/2022 to 02/2024.
2. The subject of the project solution is the development of technology for the production of a multilayer structure from nanospun material.
3. Aims of the project: The aim of the Czech team is to develop and market a unique, directly industrially usable device for the production of layered structures in general from electrospun materials. The uniqueness of this device is that it allows to program the composition and structure of individual layers. It will make it possible to create a 3D spatial structure of a material that will have a function imitating certain biological structures, such as a cell membrane or a membrane with Donnan equilibria.

A suitable material for layering is electrospun chitosan with a certain surface finish, which will be supplied by the Vietnamese project partners. Another goal is to contribute to the knowledge in the field of controlled release of substances from materials, which is crucial for the better functioning of medical materials.

4. Expected results
 1. Prototype of equipment for the production of laminated material Gprot – Prototype
 2. Utility patent– Equipment for the production of laminated material from electrospun chitosan Fuzit – Utility patent
 3. Equipment for the production of laminated material from electrospun chitosan Ztech - Proven technology
5. The beneficiary is responsible for project management.

III.

Material content of cooperation between the beneficiary and another participant and the partners

1. In order to fulfill the subject of the contract defined above, the contracting parties undertake to cooperate by ensuring the cooperation of the beneficiary and another participant and partners (or other authorized persons as specified in the project) to solve the following tasks within the project:

The Vietnamese project partners (Lead Organization (INPC) and Participating Organization (Institute of Nanotechnology Phenikaa University)) will be engaged in the production of electrospun chitosan and perform surface treatment by physical sorption of the active substance. The methodology and results are described in detail in the annex to this contract and in the Vietnamese part of the application submitted to the MOST agency.

The Czech project partners (beneficiary and another participant) will develop equipment for layering these materials. The device consists of a very accurate 3D printer (ZMorph VX), which will be modified to allow 3D printing from gel or paste. The second part will be a layering mechanism from the production of VIA ALTA. The 3D printer requires high resolution, which the above printer offers (up to 25 micrometers in space point size). The layered structure is produced by the 3D printer printing a thin layer of hydrogel and applying a layer of nonwoven fabric to this layer using a mechanical device. The technique described will make it possible to create a layered structure of hydrogel and chitosan that will have a permanent shape, which currently solves the biggest problem in printing soft materials such as soft tissue coatings. In this case, they act as scaffolds that hold the structure.

In the second phase, materials with different concentrations of surface treatment will be layered with a certain substance used in healthcare. This will allow a controlled flow of the substance inside the material to the external environment (into a pure hydrogel that simulates the skin, wound surface, or dermatological defect). This is the case when the active substance is released in a controlled and slow manner.

In the third phase, it will be possible to structure the printed hydrogel layer differently. This allows the imitation of very interesting 3D natural systems. For example, it is the cell wall that will be thicker than the actual phospholipid bilayer of the cell but will have a similar function. Furthermore, it may be a system that exhibits Donnan's equilibria and, in addition to the chemical flux from the previous paragraph, will exhibit an electric charge flux (ion exchange). The Vietnamese side (Lead Organization (INPC) and Participating Organization (Institute of Biotechnology (IBT)) will evaluate the pharmacological effects of 3D materials attached with herbal active ingredients and coordinate with 2 companies (Participating Organization: Thai Minh Pharmaceutical Joint Stock Company and Voi Trang Co Ltd.) to product trial production for medical and agricultural applications.

The material content of the project implementation and the expected results are described in detail in the project proposal, which is available to both parties.

2. Due to the current situation and the limited budget, the Czech side will not sponsor 25,252.00 \$ for Vietnamese side as in the previous proposal of the project (Category: expenditure items for which Vietnam is sponsored). Instead, the Czech side (CEITEC) will lend equipments and machinery and provide free laboratory consumables (small amount of material (in range of hundreds USD) during Vietnamese partners's internship in the BUT CEITEC's facilities. The Vietnamese side shall provide the material as stated in the proposal of the project.

IV.

Tangible property rights

1. The owner of the tangible assets necessary for the solution of the project and acquired from the provided special-purpose funds is the contracting party that acquired the said assets or created them during the solution of the project. If these assets were acquired or created jointly by the beneficiary and another participant or the partners in equal shares, their share in the ownership of these assets is the same; unless otherwise agreed.
2. The property, which the another project participant or the partners acquires in direct connection with the fulfillment of the project objectives and which it acquires from the provided earmarked funds, is not entitled to dispose of the property in relation to third parties in contrary to this contract without the prior written consent of the beneficiary until all rights and obligations from this contract are settled.

V.

Intellectual property protection

1. The parties to this contract expressly declare that they consider all information related to the project solution, including its design, knowledge, results of the project solution or parts thereof to be confidential or their trade secrets, unless expressly agreed otherwise in a particular case. The Contracting Parties shall treat as confidential any information of a technical or commercial nature relating to the project which one Party makes available to the other Party, unless the providing Party expressly states at the time of transmission that it is not of a confidential nature. The Contracting Parties undertake to ensure the confidentiality of all confidential information with due care and not to pass on confidential information obtained from another Contracting Party without its prior written consent to a third party. Confidential information may be disclosed

only by personnel of the Contracting Party and its subcontractors who need to know it for the proper execution of the project. The obligation to protect confidential information does not apply to information already lawfully published and to information compulsorily transmitted to the subsidy provider, control bodies in connection with the provided subsidy and to the Register of Information on Results (RIV). If the subject of the project is also classified information according to a special law, the handling of them is governed by the valid legislation.

2. Background knowledge:

- a) The contracting parties enter the project with the necessary skills, know-how and other intellectual property rights that are necessary for the implementation of the project (background knowledge):
- b) The background knowledge remains the property of the party who provides it for project purposes.
- c) The other contracting parties are entitled to use the background knowledge for work on the project, if it is absolutely necessary, for the duration of the project free of charge.
- d) The parties have the right to be granted a non-exclusive license under fair and reasonable conditions for the background knowledge owned by another party if they necessarily need it to use their own project results, because without them the use of their own results would be technically or legally impossible. The license must be applied for within two years of the end of the project.
- e) The contracting parties are not entitled to use the background knowledge for another purpose and in another way, unless they agree otherwise in writing in advance by a special contract.
- f) The Parties shall use the other Party's background knowledge at their own risk and acknowledge that the background knowledge is made available to them without any warranty, in particular as to its accuracy, precision and fitness for a particular purpose. Each party shall be solely liable for any loss, damage or injury to third parties resulting from the usage of background knowledge. The Contracting Party which uses the other Party's contributed knowledge shall be solely responsible for any infringements of the intellectual property rights of third parties.

3. Intellectual property protection:

- a) The owner of the results is obliged, at his own expense and responsibility, to suggest and implement appropriate protection of the intellectual property embodied in the achieved results. The protection of intellectual property consists mainly in the filing of domestic and / or foreign patent, utility model or (industrial) design application trade secret, or copyright.
- b) If the result is jointly owned by the contracting parties, they shall file an application for protection together, so that the contracting parties become co-owners. For rights and obligations between the contracting parties as co-owners, the provisions of generally binding legal regulations governing co-ownership shall apply; the parties share in the costs of obtaining and maintaining protection according to co-ownership shares. The transfer of the industrial property rights, in particular the transfer of a patent or utility model, the offer of a license or the conclusion of a license agreement with a third party will always require the written consent of all co-owners. Each of the co-owners is entitled to independently assert claims for demonstrable violations of rights to the intellectual property. Royalties from the licensing of jointly owned results to third parties shall be divided in accordance with the co-ownership shares.

4. The contracting parties are obliged to ensure that they are entitled to freely dispose of these rights (especially properly and timely to claim the right to employee invention, utility model or industrial design). Each party is responsible for settling the claims of inventors and authors on its side.

5. Unless the parties agree otherwise in writing, the provisions of this article shall apply mutatis mutandis to claims for project results in the event of early termination of the contract

VI.

Rights to results and exploitation of results

1. Rights to results:
 - a) The party that generates (creates by its own creative inventive work) the results shall be the owner.
In the case of the jointly-generated results by several or all parties together, these results shall be jointly-owned by these parties. The ownership shares shall be determined by the creative input of the individual contracting party.
 - b) If it is not possible to determine the creative input of the individual contracting parties and the parties have not agreed otherwise, the co-ownership shares shall be equal..
2. Use of results:
 - a) The Contracting Party is entitled to non-exclusive use of the results owned by the other Contracting Party, if they are necessary for the use of the project results owned by this Contracting Party, under fair and reasonable conditions.
 - b) Each co-owner is entitled to commercially use the results under fair and reasonable conditions, such as provide the other co-owner(s) with financial compensation. These co-owners shall set their mutual rights and obligations in separate written contract.
3. The provisions of the aforementioned paragraphs do not prevent the contracting parties from making an agreement about the ownership and use rights to the project results differently in individual cases, while respecting the applicable legislation and project conditions set by the provider.
4. Unless the parties agree otherwise in writing, the provisions of this article shall apply mutatis mutandis to claims for project results in the event of early termination of the contract..
5. The Contracting Parties undertake to co-operate and provide each other with maximum co-operation in order to draw up an implementation plan for the results. The parties shall use the results or licence them to third parties in accordance with the implementation plan. For the avoidance of doubt, the parties expressly declare that this contract does not transfer any rights to the results to any of the parties.

VII.

Liability and sanctions

1. For each serious breach of the obligations arising from this contract, the contracting party that breached its obligation is obliged to pay the other contracting party a contractual penalty in the amount of CZK 10,000. This contract on contractual penalties does not affect the right of the contracting party to compensation for the damage incurred, which it is entitled to recover independently.
2. In the event of a breach of the obligations and rules of cooperation defined in this contract by one of the parties, the party that caused the breach is liable to compensate the other party for provable damage.

3. No party shall be responsible to any other party for any indirect or consequential loss or similar damage such as, but not limited to, loss of profit, loss of revenue or loss of contracts. Each party shall be solely liable for any loss, damage or injury to third parties resulting from the performance of the said party's obligations by it or on its behalf under this contract or from its use of results.
5. No party shall be considered in breach of this contract if it is prevented from fulfilling its obligations under the contract by Force Majeure.

VIII. Final Provisions

1. The other participant unconditionally undertakes to abide by the contract for the provision of support for the solution of the project concluded between the provider and the beneficiary, including all its annexes. The other participant is also obliged to provide the beneficiary with all necessary cooperation in order to comply with the obligations arising from the contract for the provision of support concluded with the provider.
2. The contractual penalties agreed in this contract do not saturate the injured party's possible claim for damages.
3. This contract shall be construed in accordance with and governed by the laws of the Czech Republic excluding its conflict of law provisions. Principles that are not regulated by this contract are governed by Act No. 89/2012 Coll., The Civil Code, as amended, and legal regulations related to the Civil Code for the purposes of this contract, in particular Act No. 130/2002 Coll., on the support of research, experimental development and innovation from public funds and on the amendment of some related acts (the Act on the Support of Research and Development), as amended.
4. This contract can only be changed in writing, its change in another form is excluded. For this purpose, conduct made by electronic or other technical means (e-mail, fax) is not considered to be in writing. The contracting parties may object to the invalidity of the amendment to this contract due to non-compliance with the form at any time, even after the commencement of performance.
5. This contract on mutual rights and obligations between the parties enters into effect from the date of commencement of the project solution, for a definite period until the end of the project solution and settlement of all related obligations of the contracting parties, but with the exception of the surviving Articles VII and VIII of this contract.
6. Either party may terminate this agreement. In such a case, the notice period is two months and its run begins on the first day of the month following the delivery of the notice. The notice must be given in writing, otherwise it is invalid.
7. By signing this contract, the contracting parties confirm that they are aware that the contract is subject to the obligation of its publication pursuant to Act No. 340/2015 Coll. on the register of contracts, as amended. The contract shall be published by BUT.
8. This contract is concluded in electronic form signed by at least an advanced electronic signature according to the eIDAS Regulation
9. This contract contains a complete agreement on the subject of the contract and all the requisites that the parties wanted to agree in the contract, and which they consider important for the binding nature of this contract. No statement made by the parties during the negotiation of this contract or any statement made after the conclusion of this contract shall be construed in a manner inconsistent with the express provisions of this contract and shall not create any obligation on the part of either party.

10. The parties shall endeavour to settle their disputes amicably. All disputes arising out of or in connection with this contract, which cannot be solved amicably, shall be finally settled by the courts of Czech Republic.
11. The parties expressly confirm that this contract is the result of their negotiations and that each party has had the opportunity to influence its conditions.
12. The contract consists of this core text and Attachment 1 (substantive content of the project for the Vietnamese partners).

In the Czech Republic VIA ALTA a.s. on In Vietnam on _____

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