Development of a unit for decellularization by supercritical CO_2, optimization of permeations and recipes for tissue decelularization and production of a bioactive scaffold equipped with mesenchymal cells

Project name	**Development of a unit for decellularization by supercritical CO_2, optimization of permeations and recipes for tissue decelularization and production of a bioactive scaffold equipped with mesenchymal cells**
Registration number	FW06010688
Realization date	1. 1. 2023 — 31. 12. 2027
Recipient	University of South Bohemia in České Budějovice (FFPW USB) Národní Centrum Tkání a Buněk a.s. (main)
Grant program	Technology Agency of the Czech Republic
Responsible solver (FFPW USB)	Ing. Jakub Bumba, Ph.D.

PROJECT GOALS

The aim of the project is to prepare a so-called scaffold based on decellularized human tissue with subsequent mesenchymal stem cells. The basis will be the design of a decellularization unit for decellularization of tissues by supercritical CO_2, its implementation in the premises of the National Center of Tissues and Cells, the decellularization of various tissue types, optimization of decellularization protocols and fitting the resulting scaffold with suitable cells. The basic output of the project will therefore be a scaffold (scaffolding based on an extracellular matrix with a preserved 3D structure, copying the structure of the original tissue).

PROJECT BUDGET

	Amount CZK
Total approved costs	30 516 thou. CZK
Public financial support	21 033 thou. CZK
Other public sources	0 thou. CZK
Non-public and foreign sources	9 482 thou. CZK

CONTACT

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