

Date 15. 02. 2023

Deadline ... ..

**CONTACT**

<b>Organisation</b>	University for Continuing Education Krems	<b>Department</b>	Center for Regenerative Medicine
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<b>City</b>	Krems	<b>Website</b>	https://www.donau-uni.ac.at/en/university/faculties/health-medicine/departments/health-sciences-medicine-research/centers/regenerative-medicine.html
<b>Country</b>	Austria		

**Organisation type**

<b>Research organisation type</b>	<input type="checkbox"/> Research Organisation <input checked="" type="checkbox"/> University <input type="checkbox"/> Company <input type="checkbox"/> Other	<b>Is your company a Small and Medium Sized Enterprise (SME*)?</b>  <b>Number of employees:</b>	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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Your enterprise is an SME if:

- it is engaged in **economic activity**
- it has **less than 250 employees**
- it has either an **annual turnover not exceeding €50M**, or an **balance sheet total not exceeding €43M**
- it is **autonomous**

For the definition of SMEs, look at: [http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition\\_en](http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en)

**Short introduction of key areas of institute's research:**

The Center for Regenerative Medicine is working on creating and developing tissue engineering methods. The main focus of the research in this center is the development of alternative therapies and the improvement of already existing therapies for orthopedic problems of the musculoskeletal system. Within this framework, the center is working on different cell culture methods and cell resources. Furthermore, the center is investigating organic material for its biocompatibility and cell-matrix interaction. The center is especially concerned about the practical use of these tissues in clinical settings and to their technical feasibility as well as their ethical justification. The Center for Regenerative Medicine strives to integrate its new knowledge and concepts with the methods of industrial processing. Together with partners from the industry, the center wants to develop business models and create cost-effective tissue engineering in a greater socio-economical context.

Former participation in an FP European project?

☐ YES ☒ NO

Project title / Acronym:

Activities performed:

### Expertise / Commitment offered

Description of your expertise:

To conduct a project investigating the vicious circle of crosstalk between synovial cells and chondrocytes during OA and a potential intervention modeled in a 3D bioreactor mimicking a human knee joint, we can offer the following expertise:

- We have access to human patient tissue donations, isolate and cultivate cells on a routine basis (chondrocytes, MSCs).
- We characterize human MSCs and produce extracellular vesicles from human adipose MSCs in small scale 3D bioreactors.
- We isolate and characterize human MSC-derived extracellular vesicles, as well as perform functional assays of chondrocytes treated with extracellular vesicles
- We have expertise in co-culture model of chondrocytes and stimulated M1 macrophages.

Keywords specifying your expertise:

Mesenchymal stem cells, extracellular vesicles, ultracentrifugation, ultrafiltration, (primary) cell biology, bioreactor cell culture, biochemical characterisation, Western blot, flow cytometry, ELISA, PCR

Commitment offered:

☒ Research ☐ Demonstration ☐ Training  
☒ Technology ☐ Dissemination ☐ Other:

Interested in participation in project types:

☒ Research & Innovation Action ☒ Innovation Action ☒ EIC Pathfinder

### Work Programme research areas: indicate your interest

Cluster 1 Health

Call topic(s): HORIZON-HLTH-2024-TOOL-05-06-two-stage

Do you have other partners for this topic (which partners/country)?

No

**Profile of partner sought**

**Role**

<input checked="" type="checkbox"/> technology development	<input checked="" type="checkbox"/> research	<input type="checkbox"/> training
<input type="checkbox"/> dissemination	<input type="checkbox"/> demonstration	<input type="checkbox"/> other _____

**Country /region**

<input type="checkbox"/> any
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**Expertise required**

<p>We are looking for a consortium on elucidating the secretory crosstalk between synovial cells and chondrocytes during OA with focus on but not limited to signals exchanged via extracellular vesicles in a custom bioreactor allowing the co-culture of different human cell types in defined spatial organisation. The required expertise encompasses (1) high throughput profiling of secretomes, eg. pro- and anti-inflammatory cytokines, extracellular vesicle associated miRNAs, (2) single cell transcriptomic profiling and data processing from heterogeneous cell populations, eg. annotation, clustering, functional association, and/or (3) large scale production of therapeutic extracellular vesicles under GMP conditions.</p>
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**I agree with the publication of my contact data:**

☒ YES

☐ NO