Call for proposals

ReGEN Biomedical Developmental Program

Process Development for protocol optimization and manufacturing scale-up for multi-cellular microtissues

"Multi-cellular microtissue development"

Details

Submission Deadline:	Jan 1st 2027
Funding Details:	This specific call allows for projects up to 2.5 million euros. Only 1 project will be awarded funding.
Project duration:	Projects needs to be finalized in 24 months after granting.
Eligibility Criteria:	Please refer to the general call for proposals guideline.
Application Process:	Please refer to the general call for proposals guideline.

1. Background and Rationale

ReGEN Biomedical is developing an open, scalable manufacturing infrastructure for regenerative medicine, with a strong focus on robust, reproducible, and cost-effective production of human cells and tissues. One of ReGEN's focus areas is multi-cellular microtissues. Multi-cellular microtissues, such as organoids and early development models, offer significant potential for research, drug development and regenerative medicine. However, reproducibility is a major challenge for them in terms of cell type ratios and structural organization, which can often lead to functional differences. This issue becomes even bigger when production needs to be scaled. There is therefore room for process development innovation which addresses these challenges. Automation of protocols could assist and further overcome the barriers as it enables process reproducibility and scale in screening or production, while reducing repetitive manual labor, and with the potential to reduce product costs downstream by faster searches for lower cost media replacements and economies of scale. This call aims to develop (automation-oriented) processes which address these challenges.

2. Objective of the Call

The objective of this call is to support projects that:

- Innovate on process development for the robust and reproducible manufacturing of multi-cellular microtissues.
- Deliver experimental evidence, defined success criteria and a clear recommendation for further development, validation or scale-up.
- Contribute to ReGEN Biomedical's broader roadmap toward automated, high-quality, and cost-effective regenerative medicine manufacturing.

Projects should focus on process development and experimental validation, rather than routine optimization or purely exploratory biology.

3. Scope of Eligible Projects

Projects submitted under this call should fall within industrial research and/or experimental development and may include, but are not limited to, the following activities:

- Improving the production efficiency and reproducibility of multi-cellular microtissues by protocol optimization;
- Automating and scaling production of multi-cellular microtissues;
- Developing controlled harvesting, recovery or downstream-processing methods;
- Establishing measurable success criteria and robust quality-control methods.

4. Out of Scope

The following are explicitly out of scope for this call:

- Purely descriptive or exploratory biological studies without a clear process-development objective;
- Routine scale-up of already fully established and validated manufacturing processes;
- Clinical studies or activities requiring clinical-grade manufacturing.

5. Expected Outcomes

At the end of the project, applicants are expected to deliver:

- A validated robust and reproducible multi-cellular microtissue production process, reached via innovative process development approaches;
- Quantitative data demonstrating performance and reproducibility;
- Clear conclusions on scalability, limitations, and next development steps;
- Documentation suitable for internal decision-making and potential follow-up development within the ReGEN Biomedical infrastructure.

6. Who Can Apply

Applications are welcome from:

- Small, medium-sized, and large enterprises active in cell therapy, regenerative medicine, bioprocessing, or enabling technologies;
- Consortia of companies and/or research organizations, provided at least one industrial partner is included;
- Applicants must demonstrate relevant expertise in human cell culture and experimental process development.

Projects should make use of ReGEN Biomedical facilities and expertise where relevant, or clearly justify the use of external infrastructure.

7. Evaluation Criteria

Proposals will be evaluated based on:

- Alignment with the objective and scope of this call;
- Making meaningful use of ReGEN Biomedical's infrastructure and expertise;
- Scientific and technical quality of the proposed approach;
- Feasibility and robustness of the experimental plan;
- Relevance for scalable regenerative medicine manufacturing;
- Strategic fit with ReGEN's goals;
- Potential economic and societal impact.

8. Contact Information

For queries, please reach out to projects@regenbiomedical.com.

9. Applications

Applications for the ReGEN Biomedical Developmental Program may be submitted at any time during the call period. The full application comprises the following:

- a signed application form including a completed project plan, including appendices;
- project budget;
- declaration of no financial difficulties;
- relevant support letters (optional).

Projects must fit within the scope of the facilities of ReGEN Biomedical and when possible make use of pilot factory facilities (ReGEN Biomedical, SBMC, NEXCTGEN and ICAT). ReGEN Biomedical will appoint a project supervisor who will explore opportunities with applicants during the drafting period. If there are compelling arguments, facilities may be used elsewhere. The cost of using ReGEN Biomedical facilities and/or expertise is made available at market rates and is budgeted as third-party costs.

Templates for the application form including project plan and project budget can be downloaded from www.regenbiomedical.com.

The full application can be sent to projects@regenbiomedical.com