

Associate Scientist - Cellularization

What we do

United Therapeutics Corporation focuses on the strength of a balanced, value-creating biotechnology model. We are confident in our future thanks to our fundamental attributes, namely our commitment to quality and innovation, the power of our brands, our entrepreneurial culture and our bioinformatics leadership. We also believe that our determination to be responsible citizens — having a positive impact on patients, the environment and society — will sustain our success in the long term.

We currently have five approved products on the market and a long-term mission of providing an unlimited supply of transplantable organs for those who need them.

Our company was founded by an entrepreneur whose daughter was diagnosed with a life-threatening condition. She sought to find treatment options and a cure for her daughter and patients like her. We are founder-led, and relentless in our pursuit of “medicines for life”. We continue to research and develop treatments for cardiovascular and pulmonary diseases, pediatric cancers and other orphan diseases.

How you'll contribute

Develop strategies to cellularize 3D printed scaffolds to generate functional tissue engineered lungs. Create, optimize, and implement analytical metrics that provide insight into the stability and function of printed scaffolding material. Provide expertise on lung tissue engineering methodologies and techniques required to generate a cellularized 3D printed lung scaffold. Support the development of methods and protocols to produce cellularized 3D printed lung constructs which are suitable for pre-clinical and in-vitro functional evaluation.

Key job responsibilities

- Actively support or lead efforts to create, develop, and evaluate cellularized 3D printed bioscaffolds for lung tissue engineering
- Establish and maintain a deep understanding of current and emerging technology in lung cell biology, lung physiology, bioscaffold design and lung tissue engineering
- Establish, modify, and improve cell seeding methods to evaluate suitability of 3D printed bioscaffolds for cellularization efforts
- Provide hands-on reduction to practice for manufacturing of prototypes for the Organ Manufacturing program
- Perform cell studies to address technical and scientific challenges to support cellularization of 3D printed scaffolds
- Independently and collaboratively develop and execute molecular and cellular assays to evaluate cell phenotype and function of cellularized 3D printed bioscaffolds

- Independently and collaboratively develop and execute assessments to evaluate gas exchange and perfusibility of cellularized 3D printed bioscaffolds
- Follow existing test practices and develop additional experimental plans to achieve project milestones; understanding and adhering to critical path activities and assembling equipment necessary to execute experimental plans for prototype development
- Conduct (and supervise, if necessary) lab work and prototype performance testing; interpret data and results to provide guidance on design iterations
- Make recommendations and set new directions for assigned projects based on data; testing results and feedback from 3D printing, scaffold design, and bioink development leads
- Perform other duties as assigned

For this role you will need

Minimum Qualifications

- PhD degree in Biomedical Engineering, Cell Biology, or related field
 - 1-3 years of experience in an engineering R&D environment, not inclusive of time in graduate school
 - Demonstrated success (i.e. products and/or publications) and knowledge in tissue engineering and its related concepts; or cellularization of scaffolds design for tissue engineering applications
 - Knowledge of Aseptic Technique and mammalian cell culture
 - Knowledge of bioreactor development and assembly
 - Knowledge of Cell and biomaterials interaction
 - Knowledge of imaging and microscopy; and molecular biology assays and techniques
 - Proficient with MS Office (Excel, PowerPoint, Word)
 - Able to travel up to 10% as needed

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Life as a Unitherian

At United Therapeutics, you'll realize quickly that it is not an ordinary place to work! When you join our company, you will learn, grow, contribute, have fun, and be challenged... all while making a difference in the lives of our patients.