

Special Issue

Cell Tissue Engineering and the Lung

Message from the Guest Editors

Cell tissue engineering approaches can be used to regenerate damaged organs or even replace dysfunctional ones. The lung is an organ that primarily functions to transport oxygen into the blood and remove carbon dioxide. Many lung diseases may initially limit patient functional activity and can ultimately lead to respiratory failure and death. Current medications have limited efficacy for common disorders such as emphysema and pulmonary fibrosis. Current developments in biomaterials and/or cell tissue engineering involve the use of cell culture on three-dimensional scaffolds, highlighting the importance of extracellular matrix composition and how it can modulate lung compliance and limit its ability to expand and ventilate effectively. Other technologies include the investigation of 3D printing technologies, hybrid biomaterials, biomechanical cues, mechanobiology, and tissue engineering—all necessary to achieve the ultimate goals of *in vivo* effectiveness. We invite you to contribute your work to this Special Issue of *JFB* on “Cell tissue engineering and the lung”. **Keywords**

- cell tissue engineering
- biomaterials
- lung
- bioprinting

Guest Editors

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About the Journal

Message from the Editor-in-Chief

The biomaterials field is one of the largest and fastest growing research areas both in the scientific community and in the industrial one. Biomaterials are the result of collaborations between different disciplines: chemistry, medicine, pharmacology, engineering and biology. The objective of this collaboration is to lead to the implementation of new devices to restore form and human body functions. The mission of the *Journal of Functional Biomaterials (JFB)* is to focus attention on physico-chemical characteristics and their importance in the interactions between biomaterials and living tissues. *JFB* seeks to publish studies on the preparation, performance and use of biomaterials in biomedical devices, as well as regarding their behavior in physiological environments. We are pleased to welcome you as our authors.

Editor-in-Chief

Prof. Dr. Pankaj Vadgama

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