

Special Issue

Advances in Cardiovascular Tissue-Engineering

Message from the Guest Editors

Cardiovascular tissue engineering theoretically offers the possibility of treating a wide range of structural diseases of the heart and vascular system. In addition to holistic organ transplantation, many approaches focus on the stepwise regeneration or bioartificial replacement of partial cardiovascular structures, e.g., heart valves, cardiac patches, bioartificial vessels, or stem cell transplantation in areas of myocardial infarction. In addition to the technical challenges of biological manufacturing, the current focus is also on the risks of these future therapies; tumorigenicity, graft rejection, immunogenicity, and cell migration are major problems of tissue engineering that have not yet been fully solved. Therefore, this Special Issue focuses on the interdisciplinary research in and development of cardiovascular science and engineering by bringing together cutting-edge contributions from worldwide experts on translational medicine, engineering, cell and gene therapy, bioprinting, bioreactor design, bioprocess development, and the manufacturing of stem-cell-based therapies.

Guest Editors

Dr. Rouven Berndt

Clinic of Cardiovascular Surgery, University Hospital Schleswig-Holstein, 24105 Kiel, Germany

Dr. Chung-Hao Lee

Department of Bioengineering, University of California, Riverside, CA 92521, USA

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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Prof. Dr. Anthony Guiseppi-Elie

Department of Biomedical Engineering, Texas A&M University, College Station, TX 77843, USA

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