Special Issue

Mechanical, Cellular and Molecular Mechanisms on Heart Valve Disease

Message from the Guest Editors

Heart valve disease affects about 2.5% of the population, with increasing prevalence at older age. The cardiac valves consist of a heterogeneous cell population which resides in a highly organized extracellular matrix. The positioning of the valves in the heart and their specific configuration exposes each part of the leaflet to unique mechanical stresses during the cardiac cycle. Insight into the interaction between the valvular cells, extracellular matrix, and its mechanical environment is crucial for the understanding of the pathophysiology of heart valve disease. In this Special Issue, we welcome original research papers and review articles on the mechanical, cellular, and molecular mechanisms involved in heart valve disease with an emphasis on the interactions between valvular cells and their environment, new model systems, and new targets for pharmacological therapies.

Guest Editors

Dr. Boudewijn Kruithof

Department of Cardiology, Leiden University Medical Center, Einthovenweg 20, 2333 ZC Leiden, The Netherlands

Prof. Dr. Elena Aikawa

Center for Interdisciplinary Cardiovascular Sciences, Division of Cardiovascular Medicine, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA 02115, USA

Deadline for manuscript submissions

closed (20 February 2022)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/71733

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)