

## Special Issue

# The Impact of Altered Metabolism on Cardiac Development and Disease

### Message from the Guest Editor

The heart is the first organ formed during embryogenesis and continues its rhythmic contractions throughout the entirety of life. While the heart utilizes glycolysis to produce ATP in a relatively hypoxic amniotic environment, it becomes reliant on mitochondrial respiration as oxygen levels rise at birth. The heart initially uses lactate and glucose to fuel oxidative phosphorylation but later depends on the  $\beta$ -oxidation of fatty acids for the vast amount of ATP required for adult circulation. Cardiac metabolism is thus dynamic and must be tightly coupled to the heart's structural and functional maturation. Genetic and environmental insults that alter metabolism can thus impact both cardiac development and the heart's responses to ischemia, pressure overload and other injuries. This Special Issue of the International Journal of Molecular Sciences will focus on how altered cardiac metabolism affects the growth, differentiation, maturation and function of the cardiomyocytes, endocardial cells, fibroblasts, and other cell types within the heart.

### Guest Editor

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### Deadline for manuscript submissions

closed (31 May 2023)



## International Journal of Molecular Sciences

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CiteScore 9.0  
Indexed in PubMed



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*International Journal of  
Molecular Sciences*  
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### Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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