

## Special Issue

# Novel Genotypes and Experimental Advances in Xenotransplantation

### Message from the Guest Editor

Xenotransplantation has emerged as a promising solution to the critical organ shortage, driven by advances in genetic engineering and preclinical models. This Special Issue explores cutting-edge developments in the field, focusing on novel genotypes and experimental methodologies that enhance transplant success. Key topics include the role of genetically modified donor organs, particularly with modifications targeting immune compatibility and oxidative stress regulation. The series will further highlight tools for evaluating xenotransplant viability in a clinically relevant setting. Studies on genetic modifications to reduce rejection mechanisms, enhance organ longevity, and optimize metabolic pathways will be featured. Additionally, research on oxidative stress mechanisms in xenotransplantation will be discussed, with a focus on genes that regulate inflammatory and stress responses in donor and recipient tissues. Other areas of interest include advances in immunosuppressive strategies, novel biomarkers for xenograft function, and emerging preclinical models that bridge the gap between experimental and clinical application.

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### Guest Editor

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### Deadline for manuscript submissions

closed (20 April 2026)



## International Journal of Molecular Sciences

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Impact Factor 4.9  
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

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