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Advanced Assessment of Medical Devices

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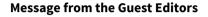
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Deadline for manuscript submissions: **30 November 2024**



The preclinical assessment of implantable medical devices is essential for enhancing both their safety and efficacy before reaching the patient. In light of recent high-profile clinical failures, preclinical testing regimes which previously used simplified or averaged conditions and ex situ analysis have faced increased scrutiny. This fails to capture clinically relevant failure modes and provides limited actionable or predictive data on the long-term performance of devices, hindering the effective translation and adoption of emerging technologies.

This Special Issue of Bioengineering on Advanced Assessment of Medical Devices aims to showcase device development and assessment that goes beyond the current state of the art by inviting contributions from the community in the following areas (among others):

- Advanced preclinical testing;
- Device-biology interaction;
- Co-creation with patients, clinicians, regulators, and industrial partners;
- Machine learning and in silico digital twin methodologies;
- Predictive models for device behaviour in vitro and in vivo;
- High-throughput methodologies for biomaterial characterisation.





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Editor-in-Chief

Message from the Editor-in-Chief

Prof. Dr. Anthony Guiseppi-Elie

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Rapid Publication: manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.6 days after submission; acceptance to publication is undertaken in 3.1 days (median values for papers published in this journal in the first half of 2024).

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