Special Issue

Biomedical Engineering and Biomarkers in Plastic and Reconstructive Surgery Applications

Message from the Guest Editors

This Special Issue aims to present the latest research and developments in the application of biomedical engineering to plastic and reconstructive surgery.

- Advanced biomaterials for tissue engineering and reconstruction:
- 3D bioprinting and its applications in reconstructive surgery;
- Cell-based therapies for enhanced wound healing and tissue regeneration;
- Development and optimization of scaffolds for soft and hard tissue repair;
- Integration of sensors and smart materials for postoperative monitoring;
- Biomechanics and mechanobiology in reconstructive procedures;
- Personalized and precision medicine approaches in plastic surgery;
- New techniques for vascular and nerve regeneration;
- Computer-aided design and simulation for preoperative planning and surgical training;
- Novel drug delivery systems for infection control and improvement of healing;
- Adipocyte biology and its role in tissue regeneration and repair;
- Impact of surgical interventions on metabolic markers:
- Identification and utilization of metabolic biomarkers as future diagnostic and therapeutic targets.

Guest Editors

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Editor-in-Chief

Prof. Dr. Anthony Guiseppi-Elie Department of Biomedical Engineering, Texas A&M University, College Station, TX 77843, USA

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