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Materials in Cell Therapies and Cell Manufacturing

Guest Editor:

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Deadline for manuscript submissions:
closed (30 June 2021)

Message from the Guest Editor

In cell therapy, cells with therapeutic potential are (1) harvested from a patient (autologous) or donor (allogenic); (2) expanded and sometimes genetically, chemically, or physically modified, and (3) then introduced into the patient. Cell therapies are being approved worldwide, including CAR T-cells to treat cancer, and mesenchymal stromal cells (MSCs) to treat acute graft versus host disease, while many others are undergoing clinical trials. In all steps of cellular therapies, from harvest to delivery, materials play a critical role. Cells are known to respond to a material's geometry, topography, stiffness, and chemistry. Thus, finely tuning materials throughout the cell manufacturing and cell therapy process is essential to ensure therapeutic success. In this Special Issue, we invite contributions from researchers exploring the role of materials in the context of cell therapies and cell manufacturing. Articles regarding materials for cell delivery, cell expansion, enhancing cell potency, cryoprotection, gene therapy, and bioreactors, among others are welcome as either full papers, communications, or reviews.

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Message from the Editor-in-Chief

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