



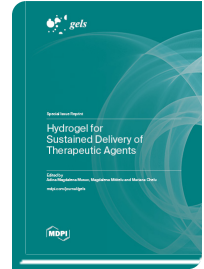
Special Issue Reprint

Hydrogel for Sustained Delivery of Therapeutic Agents

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Polymer hydrogels are attractive materials utilized for the controlled release of drugs and therapeutic agents due to their ability to embed biologically active agents in 3D water-swollen networks. The latest advancements in natural biomaterials, polymer chemistry, and bioengineering domains have facilitated numerous developments in the field of hydrogels for the sustained delivery of therapeutic agents. In light of this, the current Special Issue is focused on the state of the art in the field of hydrogels, focusing on several exciting subjects, including cross-linking methods, stimuli-responsive hydrogels, multicomponent hydrogels, aerogels, and the release of therapeutic agents from 3D-printed hydrogels. Therefore, the challenges that have been overcome due to advanced development in biodegradable, biocompatible, temperature- and pH-stimuli-responsive hydrogels and interactions between hydrogels and therapeutic agents will also be highlighted. This Special Issue will also focus on the physical, chemical, pharmacotechnical, and biological characterization of polymer hydrogels using Fourier transform infrared spectroscopy, X-ray diffraction, scanning electron microscopy, rheology, and thermal analysis methods and their applications in regenerative medicine and pharmacy. The structure–property relationships of hydrogels are necessary to establish a correlation between the design and shape of a polymer hydrogel and the different drug delivery applications.



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