

Special Issue

The Role of Albumin in Tissue Regeneration and Repair

Message from the Guest Editor

Tissue regeneration and repair are essential processes in regenerative medicine, aiming to restore the structure and function of damaged tissues. Albumin exhibits excellent biocompatibility, biodegradability, and the ability to interact with cells and growth factors, making it an attractive choice for tissue engineering applications. Researchers have successfully engineered albumin-based scaffolds, nanoparticles, and hydrogels with tailored mechanical properties, controlled release kinetics, and the ability to support cell adhesion and proliferation. Moreover, in preclinical models, albumin-based systems have demonstrated the potential to promote tissue-specific cell differentiation, stimulate angiogenesis, and accelerate tissue regeneration. However, there are still important questions that need to be addressed. Such as the precise mechanisms by which albumin enhances tissue regeneration, the design and functionalization of albumin-based bioengineered materials, and so on. Addressing these gaps will pave the way for developing novel albumin-based bioengineered materials with enhanced regenerative capabilities, ultimately advancing the field of tissue regeneration and repair.

Guest Editor

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