

Special Issue on
Stem Cells in Multifaceted Therapy for Spinal Cord Injury Repair

CALL FOR PAPERS

Spinal cord injury (SCI) often leads to severe permanent disability with limited therapy options available. Despite this pessimism, vast experimental research has resulted in improved understanding of the pathophysiology of SCI. The rapid evolution of stem cell biology has brought increasing interest in stem cell therapies for SCI. Preclinical research has shown promising results in terms of functional improvement and tissue repair. Several studies have shown tissue preservation, increased myelination, or increased axonal sprouting, but much still needs to be elucidated. Due to the heterogeneity of the trauma, however, a multifaceted approach is often deemed the best way to treat SCI in the future. Stem cells have been combined with a variety of therapeutic modalities, such as biomaterials, neurotrophic factors, antibodies, or enzymes.

Several studies have shown that these combined treatments lead to better results. The versatility of stem cells makes them attractive for further preclinical research as well as clinical studies. This has led to launching over 20 clinical trials (mostly Level I/II) utilizing different types of stem cells, some of them in combination with other therapies, in patients after SCI, though limited conclusions can be drawn from them so far. It is clear that high-quality preclinical studies and well-conducted clinical trials will be needed in order to evaluate the optimal type of cell, proper combination with other therapies, or timing of administration in order to treat SCI successfully in the future.

We would like to invite experts to submit original papers and clinical studies as well as reviews focused on combinatorial therapy using stem cells in SCI research that will help our understanding of the interplay between stem cells, other therapies, and the spinal cord lesion microenvironment. This allows for a broad spectrum of research papers, including the topics listed below.

Potential topics include but are not limited to the following:

- ▶ Experimental research studies on the use of stem cells (mesenchymal stem cells, Schwann cells, olfactory ensheathing cells, neural stem cells, etc.) in experimental spinal cord injury
- ▶ Stem cells in combinatorial therapies in experimental or clinical SCI studies
- ▶ Combining various types of stem cells in SCI repair
- ▶ Stem cells seeded on biomaterials in bridging a spinal cord lesion
- ▶ Safety and ethical issues with respect to SCI application

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/sci/scmft/>.

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First Round of Reviews

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