



## Influence of Chemicals on the Cytoskeleton: Modulation of Stem Cell Dynamics

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submissions:  
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### Message from the Guest Editors

Recent evidence highlights that the cytoskeletal dynamics play a pivotal role in mechano-sensing, mechano-transduction, and, consequently, in directing cell fate.

Different agents can interfere with cytoskeletal organization: they either disrupt or rigidify microfilaments and microtubules, respectively.

Human mesenchymal stem cells (MSCs) exhibit self-renewal, multi-lineage differentiation, and trophic signaling that make them highly attractive candidates for cell-therapy approaches. Several chemicals showing effects on the cytoskeleton interfere with MSC proliferation and ability to proceed along different cell lineages.

Potential topics include but are not limited to the following:

- \* Use of chemicals/drugs able to influence the structure and function of the cytoskeleton in stem cells;
- \* Use of natural molecules able to influence the structure and function of the cytoskeleton in stem cells;
- \* Effects of the reorganization of the cytoskeleton on stem cell dynamics: modulation of cell proliferation, senescence, and/or ability to differentiate.





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