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Feature Papers in "Stem Cells" 2023

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Message from the Guest Editors

Embryonic stem cells (ESCs), induced pluripotent stem cells (iPSCs), and adult stem cells hold great promise for future cell replacement therapies. The development of these stem cells requires in-depth knowledge in understanding and controlling the mechanisms of stem cell maintenance and exit from the undifferentiated state in specific biomaterials that mimic in vivo niches. When grown in 3D, ESCs or iPSCs can recapitulate embryonic development as blastoids or organoids do, making them ideal for drug screening and genetic disease modeling. Although cells of the inner cell mass are in a transient state in the embryo and last just for a few days, it has been possible to capture their pluripotent fate in vitro. Indeed, they can be grown as cell lines indefinitely thanks to deep insights in the fundamental knowledge of their physiology. Adult stem cells on the other hand last throughout our entire life in specific physiological niches in our body but can typically be cultured in vitro only through limited number of population doublings. In this Special issue of *Cells*, we will gather articles and reviews on recent fundamental and applied advances on ESC, iPSCs, and adult stem cells.



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Special Issue



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Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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