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## Genetic, Epigenetic, and Transcriptional Control of Cancer Stem Cell

Guest Editors:

**Prof. Dr. Haiquan Lu**

Advanced Medical Research  
Institute, Shandong University,  
Jinan 250012, China

**Prof. Dr. Lulu Wang**

Department of Pharmacy, Tianjin  
Medical University, Tianjin, China

**Dr. Yongkang Yang**

Department of Biological  
Chemistry and Institute for Cell  
Engineering, Johns Hopkins  
University School of Medicine,  
733 N. Broadway, Baltimore, MD  
21205, USA

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### Message from the Guest Editors

Tumor heterogeneity is a key characteristic of cancer. Cancer stem cells are a small population of cancer cells that have infinite proliferative potential and tumor-initiating properties. Cancer stem cells play a critical role in the initiation, recurrence/metastasis and therapeutic resistance of cancer. Therefore, a deeper understanding of cancer stem cell is urgently needed for better prevention and treatment of cancer. Cancer stem cells can be regulated at genomic, epigenomic and transcriptional levels. Mutations of driver genes are key to the formation of cancer stem cells. Epigenetic changes, such as DNA methylation and histone modification, also play important roles in cancer stem cell formation and drug resistance. In addition, transcription factors and their cofactors are critical for the maintenance and specification of cancer stem cells. In the past 20 years, genomics, epigenomics and transcriptomics studies have revolutionized our understanding of cancer stem cell, however, many questions remain largely elusive in both the mechanisms of cancer stem cell regulation and clinical application of targeting cancer stem cell.



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**Special** Issue



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6-145 Jackson Hall, 321 Church St  
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Denmark

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*Cells* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
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