Special Issue

Control of Gene Expression by Transcription and Co-transcriptional Processes in Cell Homeostasis and Cell Fate Specification

Message from the Guest Editor

The first and rate-limiting process in gene expression is transcription, in which RNA polymerase synthesizes RNA from a DNA template. In eukaryotes, RNA polymerase II (Pol II) transcribes all protein-coding and various non-coding RNA genes. All Pol II-transcribed nascent RNAs need to be further processed and modified to become mature functional RNAs.

In the past two decades, increasing evidence has revealed that transcription is intimately coupled with RNA processing and nucleosomal histone modification through extensive interaction networks. Understanding the molecular and the biological significance of these co-transcriptional processes is essential for deciphering gene control mechanisms in cell homeostasis and cell-fate specification. The Special Issue focuses on gene expression control by transcription and co-transcriptional processes such as RNA processing, RNA modification, RNA structural folding, R-loop formation, RNA degradation, RNP formation, histone modification, chromatin remodeling, heterochromatin formation, and liquid-liquid phase separation. We welcome submissions in the form of original research articles, brief reports, reviews, opinions, and methodology reports.

Guest Editor

Dr. Yutaka Hirose

Laboratory of Gene Regulation, Graduate School of Medicine and Pharmaceutical Sciences, University of Toyama, 2630 Sugitani, Toyama 930-0194, Japan

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Cells
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
cells@mdpi.com

mdpi.com/journal/cells

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About the Journal

Message from the Editorial Board

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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