

## Special Issue

# Exploring Nucleolar Organization and Ribosomal Gene Mutations in Human Health and Disease

### Message from the Guest Editor

This Special Issue highlights ribosomal genes' emerging and underexplored roles in cellular processes that are fundamental to human health. It focuses on an exciting and evolving area of research—exploring the broader, less understood roles of ribosomal genes beyond their traditional function in ribosome biogenesis.

Here is a breakdown of the key concepts and areas of interest:

#### 1. Emerging Functions of Ribosomal Genes in Cellular Homeostasis

- Genome Stability
- Stress Response
- Cell Cycle and Growth Regulation
- Epigenetic Regulation

#### 2. Nucleolar Dysfunction and Ribosomal Gene Mutations—A Link to Diseases

- Cellular Senescence
- Age-Related Decline
- Ribosomopathies
- Cancer
- Neurodegenerative Diseases

#### 3. Therapeutic Interventions Targeting Ribosomal Gene Pathways

- Small Molecule Modulators
- Gene Editing
- Nutraceuticals and Metabolic Interventions

#### 4. Key Questions to Explore

- What are the newly discovered roles of ribosomal genes in cellular homeostasis?
- How do mutations in ribosomal genes drive disease mechanisms beyond ribosome biogenesis?
- Can targeting ribosomal gene pathways provide new therapeutic opportunities?

### Guest Editor

Dr. Paola Bellosta

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## Genes

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### Message from the Editor-in-Chief

*Genes* is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised. Why not consider *Genes* for your next genetics paper?

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