



*cells*



an Open Access Journal by MDPI

## Motor Neuron Diseases: From Molecular Basic Research to Diagnosis and Therapeutics Implications

Guest Editors:

### Dr. Ilaria Martinelli

1. Department of Neurosciences,  
Azienda Ospedaliero  
Universitaria di Modena, 41124  
Modena, Italy

2. Clinical and Experimental  
Medicine Ph.D. Program,  
University of Modena and Reggio  
Emilia, 41125 Modena, Italy

### Dr. Elisabetta Zucchi

1. Department of Biomedical,  
Metabolic and Neural Sciences,  
University of Modena and Reggio  
Emilia, Modena, Italy

2. Department of Neurosciences,  
Azienda Ospedaliero-  
Universitaria di Modena, Modena,  
Italy

Deadline for manuscript  
submissions:

**30 June 2024**

### Message from the Guest Editors

Motor neuron diseases are a heterogeneous group of disorders that are implicated in the relentless degeneration of the motor system, leading to upper and lower motor neuron excitotoxicity, muscle atrophy, paralysis and finally death. Despite intensive molecular and clinical research, their etiology remains largely unclear.

Several mechanisms common to motor neuron disorders have been identified; these include excitotoxicity; abnormal intracellular and mitochondrial metabolism caused by the accumulation of oxidative species; a disturbed protein quality control system caused by the accumulation of misfolded proteins, RNA toxicity, or translational byproducts; dysfunctional autophagic machinery; and secondary As advances are made in understanding critical aspects of the underlying molecular pathophysiology, therapeutic strategies continue to evolve.

In this Special Issue, we aim to collect new findings addressing the etiology and diagnosis of motor neuron diseases, including the search for neuroprotective compounds and reliable biomarkers. Contributions related to motor neuron diseases are welcome, including original research articles and reviews.



[mdpi.com/si/183258](https://mdpi.com/si/183258)

# Special Issue



*cells*



an Open Access Journal by MDPI

## Editors-in-Chief

### **Prof. Dr. Alexander E. Kalyuzhny**

Neuroscience, UMN Twin Cities,  
6-145 Jackson Hall, 321 Church St  
SE, Minneapolis, MN 55455, USA

### **Prof. Dr. Cord Brakebusch**

Biotech Research & Innovation  
Centre, The University of  
Copenhagen, Copenhagen,  
Denmark

## 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.

## Author Benefits

**Open Access:** free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

**High Visibility:** indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [PubMed](#), [MEDLINE](#), [PMC](#), [CAPus / SciFinder](#), and [other databases](#).

**Journal Rank:** JCR - Q2 (*Cell Biology*) / CiteScore - Q1 (*General Biochemistry, Genetics and Molecular Biology*)

## Contact Us

*Cells* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/cells](http://mdpi.com/journal/cells)  
[cells@mdpi.com](mailto:cells@mdpi.com)  
[X@Cells\\_MDPI](https://twitter.com/Cells_MDPI)