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Amyotrophic Lateral Sclerosis: From Molecular Mechanisms to Therapeutic Opportunities

Guest Editors:

Prof. Dr. Andreas Hermann

Translational Degeneration
Section "Albrecht Kossel",
Department of Neurology,
University of Rostock, and
German Center for
Neurodegenerative Diseases
Rostock/Greifswald, Gehlsheimer
Straße 20, 18147 Rostock,
Germany

Prof. Dr. Paul Lingor

1. Department of Neurology,
Klinikum Rechts der Isar,
Technical University of Munich,
81675 Munich, Germany
2. German Center for
Neurodegenerative Diseases
Munich, and SyNergy Cluster for
Systems Neurology, Munich,
Germany

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Message from the Guest Editors

Dear Colleagues,

In recent years, the understanding of ALS has been fundamentally revolutionized: Thus, it is considered a neuromuscular multisystem disease on a neurodegenerative basis which forms a disease spectrum with the frontotemporal dementias. Since the discovery of TDP43 as the major component of cytoplasmic polyubiquitinated inclusions in 2006, many novel ALS-causing genes have been identified, with both genetic and pathological overlap with frontotemporal dementias. However, the functions or properties of these ALS genes can be grouped into distinct groups, which has had a significant impact on the understanding of pathophysiology. These groups include axon structure and function, protein metabolism (including autophagy and protein quality control), RNA metabolism (regulation transcription, splicing, RNA transport, RNA granule dynamics), as well as cytoplasmic protein mislocalization and phase transition. Thus, newly discovered mechanisms are increasingly being incorporated into novel therapeutic targets and strategies. This Special Issue aims to collect papers discussing such novel aspects of ALS research, from basic science to clinical translation.



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Special Issue



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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

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Contact Us

Cells Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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