Special Issue

Environmental Stress and Adaptation: Molecular Mechanisms and Ecosystems Biodiversity

Message from the Guest Editors

This Special Issue will address the diverse mechanisms through which organisms respond to environmental stressors, including those of plants, microorganisms, and aquatic biodiversity. We invite articles on molecular mechanisms, new methods for measuring oxidative damage, ecological shifts caused by abiotic stress, and environmental DNA (eDNA) metabarcoding to understand aquatic biodiversity and ecosystem health.

1. Oxidative stress: How do Reactive Oxygen Species (ROS) and antioxidants work in organisms under stress? The involvement of ROS in plants, cyanobacteria, and even more organisms relative to the effects of environmental stresses like drought, pollution, high light, and extreme temperatures will be considered.

- 2. Molecular and biochemical mechanisms: Genetic structure, cellular changes, and stress-related signaling pathways in the same organism.
- 3. eDNA metabarcoding: Using environmental DNA to measure species distribution and monitor biodiversity in complex environments.
- 4. Ecological consequences of environmental stress: How do changes at the molecular level affect, for example, species composition, environmental interactions, and community structure?

Guest Editors

Dr. Mizanur Rahman

School of Earth, Environmental and Marine Sciences, University of Texas Rio Grande Valley, Brownsville, TX 78520, USA

Prof. Dr. Takashi Asaeda

Graduate School of Science and Engineering, Saitama University, Saitama, Japan

Deadline for manuscript submissions

31 March 2026



Life

an Open Access Journal by MDPI

Impact Factor 3.4
CiteScore 6.0
Indexed in PubMed



mdpi.com/si/226681

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

mdpi.com/journal/ life





Life

an Open Access Journal by MDPI

Impact Factor 3.4 CiteScore 6.0 Indexed in PubMed



About the Journal

Message from the Editor-in-Chief

Life (ISSN 2075-1729) is an international, peer-reviewed open access journal that publishes scientific studies related to fundamental themes in life sciences. Some papers are published individually, while others are submitted for inclusion in special issues with guest editors. You are invited to contribute a research article, essay, or a review to be considered for publication.

Editor-in-Chief

Prof. Dr. Lluís Ribas de Pouplana

Institute for Research in Biomedicine (IRB Barcelona), The Barcelona Institute of Science and Technology, 08028 Barcelona, Spain

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, PMC, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biology) / CiteScore - Q1 (Paleontology)

