

## Special Issue

# Eukaryotic Cells Under Stress: Biochemical and Physiological Mechanisms of Resistance and Resilience

### Message from the Guest Editors

Eukaryotic cells constantly face environmental stressors, including pollution, climate change, and disease-related challenges. These stressors can lead to oxidative damage, DNA mutations, and protein misfolding that, in turn, compromise cellular function and organismal health. However, eukaryotic cells have developed complex biochemical and physiological mechanisms to detect, respond to, and mitigate these stresses.

This Special Issue explores plants and animal cells' molecular strategies to maintain homeostasis under stress. Topics of interest include, but are not limited to, the following:

- Oxidative stress responses and reactive oxygen species (ROS) management;
- DNA damage detection and repair mechanisms;
- Protein folding, chaperone activity, and proteostasis under environmental and disease-derived stress;
- Regulation of photosynthesis under environmental stress;
- Identification and validation of biomarkers for cellular stress and resilience;
- Computational modelling of stress response pathways.

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### Guest Editors

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## International Journal of Molecular Sciences

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