



Physio-Pathological Role of ERAD and Its Pharmacological Modulation

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Message from the Guest Editors

The endoplasmic reticulum (ER) is the site where about one-third of the eukaryotic proteome undergoes maturation and is monitored for proper folding. Protein homeostasis in the ER is assured by multiple quality control (QC) checkpoints that triage each newly synthesized protein, allowing the native ones to proceed toward the final destination and delivering the defective ones to either ER-associated degradation (ERAD), ER-phagy, the Golgi-QC, or the plasma membrane-QC. When ERQC fails, stress response pathways such as the unfolded protein response (UPR) are induced.

The present Special Issue of IJMS will mainly focus on the role of ERAD in the physiological and pathological status of cells and tissues. Indeed, ERAD directly or indirectly influences metabolism and immunity, and regulates specific enzyme concentrations as well as the stoichiometry of oligomeric complexes. Thus, studying the ERAD pathways in different tissues could unveil the molecular mechanism(s) of such diseases, envisaging novel and specific pharmacological interventions modulating ERAD to avoid/improve degradation or correct the protein architecture.





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Message from the Editor-in-Chief

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