

Special Issue on **Endoplasmic Reticulum Stress and Oxidative Stress in Inflammatory Bowel Disease**

CALL FOR PAPERS

The endoplasmic reticulum (ER) is a specialized organelle for the folding and trafficking of proteins, which is highly sensitive to changes in intracellular homeostasis and extracellular stimuli. Alterations in the protein-folding environment cause accumulation of misfolded proteins in the ER that profoundly affect a variety of cellular signaling processes, including reduction-oxidation (redox) homeostasis, energy production, inflammation, differentiation, and apoptosis. ER stress and oxidative stress play a critical role in many human diseases including inflammatory bowel disease (IBD). Some intestinal cell populations rely on a robust ER function for protein folding and secretion. Several immune cells are orchestrated by ER stress and oxidative stress for differentiation, activation, migration, and survival. In addition, a variety of exogenous and endogenous molecules in the intestinal lumen affect ER function, making ER stress and oxidative stress relevant cellular signals in intestinal homeostasis. With our increased understanding of ER stress and oxidative stress in IBD pathogenesis, it is now possible to develop novel therapies to specifically target the two pathways in the gastrointestinal tract.

In this special issue, we are interested in articles and reviews describing the molecular mechanisms by which ER stress and oxidative stress are induced under physiological and pathological conditions in the gastrointestinal tract, how the two cellular stresses impact intestinal epithelial cells, immune cells, and the microflora in the pathogenesis of IBD, and how novel IBD therapies may be developed by targeting the stress pathways.

Potential topics include but are not limited to the following:

- ▶ Recent advances in understanding the triggers of ER stress and oxidative stress in gastrointestinal tract
- ▶ Molecular mechanisms of ER stress and oxidative stress in intestinal epithelial cells in the pathogenesis of IBD
- ▶ Molecular mechanisms of ER stress and oxidative stress in mucosal immune cells in the pathogenesis of IBD
- ▶ Interaction between host stress response (e.g., ER stress and oxidative stress) and the microbiota in gastrointestinal tract
- ▶ ER stress and oxidative stress as new targets in the treatment of IBD

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/omcl/eros/>.

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Manuscript Due

Friday, 24 February 2017

First Round of Reviews

Friday, 19 May 2017

Publication Date

Friday, 14 July 2017