



Hypoxia and Hypoxia-Inducible Factors in Human Endothelium

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Deadline for manuscript
submissions:

closed (31 May 2021)

Message from the Guest Editor

Despite continuous research to elucidate the extent of HIF signaling pathways, however, their utility in therapeutic approaches has been limited in scope. To date, the main research cell models for hypoxia signaling have focused on in vitro cultures of cancer cells exposed to continuous hypoxia. These cancer cells, however, have undergone specific genetic and epigenetic modifications in order to develop their pathogenic phenotypes. Furthermore, solid tumors are exposed to fluctuating oxygen levels (cyclic hypoxia) rather than chronic hypoxia and modulate endothelial angiogenesis in order to assure their survival and tumor growth. Although normal human endothelial cells provide an alternative model to study hypoxia, they still remain underappreciated, and clearly, more research is needed to distinguish between the cancer-specific and the physiological HIF signaling pathways.

For this Special Issue of *Biomolecules*, we encourage the submission of review and primary research articles that showcase both the molecular mechanisms of hypoxic response and HIF signaling in the human endothelium, as well as models that represent crosstalk between cancer and endothelial cells.





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