



## The Role of Hypoxia, Normoxia and Hyperoxia in Cancer Initiation and Propagation

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### Message from the Guest Editor

Dear Colleagues,

The role of the tumor microenvironment for cancer initiation and propagation cannot be overemphasized. Normoxia is a state with normal oxygen levels of 20–21% in tissues; however, normal organ tissue oxygen concentrations away from the lung are usually much lower, and the term physoxia with a 5% oxygen level reflects this discordance. Hypoxia favors glycolysis with its end products ultimately leading to a lowering of pH and the promotion of tumorigenesis. Furthermore, hypoxia increases an established tumor's potential to become metastatic. In contrast, hyperoxia creates a tumor microenvironment that supports the body's immune system defense against cancer; however, the associated inflammation can cause 'protumor inflammation' mediated by IL-1 $\beta$  and is associated with local tissue damage.

This Special Issue of *IJMS*, 'The Role of Hypoxia, Normoxia and Hyperoxia in Cancer Initiation and Propagation', led by Dr. Mary M. Salvatore, aims to engage the scientific community in a conversation about oxygen concentration and its effect on cancer.





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## Message from the Editor-in-Chief

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