



## Adaptation to Hypoxia: A Chimera?

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### Message from the Guest Editors

A world-relevant clinical and environment issue that affects millions of people, hypoxia, i.e., the insufficient supply of oxygen with respect to demand, constitutes an important source of social and economic distress. Despite representing a potentially lethal condition, the human body possesses reserves that enable the recruitment of defense mechanisms to grant survival during relatively acute episodes. Clearly, however, when sustained or chronic, hypoxia is predicted to request a greater effort to balance its harmful effects, despite a longer time allowed to recruit gene- and protein-based compensatory mechanisms. Because at least some of the biological systems that constitute complex living matter have limited regenerative capacity, as the cerebral and cardiopulmonary systems, the paradigm underlying hypoxia adaptation may become particularly relevant. We believe that it is time to announce this special issue to enable us to greater understanding whether humans, who underwent genetical selection as a low-altitude population, may ever be able to adapt to environmental or pathological hypoxia, or if hypoxia adaptation is and will remain a chimera.





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