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Pulmonary Oxygen Toxicity and Exhaled Breath Analysis in Diving and Hyperbaric Medicine

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Message from the Guest Editors

Dear Colleagues,

Exposure to high concentrations of oxygen can lead to pulmonary oxygen toxicity. In the early stages, the symptoms are reversible, but extended exposure can lead to chronic pulmonary injury. This can become problematic when individuals are frequently, or for extended periods of time, exposed to high concentrations of oxygen (hyperoxia), such as in technical, occupational or military diving and patients receiving hyperbaric oxygen therapy.

Advanced methods to detect pulmonary disease are available presently: exhaled nitric oxide or diffusion capacity can assess the alveolar membrane function and exhaled breath analysis can detect single molecules. Volatile organic compounds can be detected through various methods, such as gas chromatography–mass spectrometry (GC-MS) or eNose technology, but it is uncertain which marker or method is the best replacement for the current gold standard from the 1970s.

This Special Issue of *Metabolites* is dedicated to the detection and quantification of pulmonary oxygen toxicity. We hope to provide leading experts a platform to share their research and thoughts to contribute to the direction of future research in this field.



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Special Issue



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Message from the Editor-in-Chief

The metabolome is the result of the combined effects of genetic and environmental influences on metabolic processes. Metabolomic studies can provide a global view of metabolism and thereby improve our understanding of the underlying biology. Advances in metabolomic technologies have shown utility for elucidating mechanisms which underlie fundamental biological processes including disease pathology. *Metabolites* is proud to be part of the development of metabolomics and we look forward to working with many of you to publish high quality metabolomic studies.

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