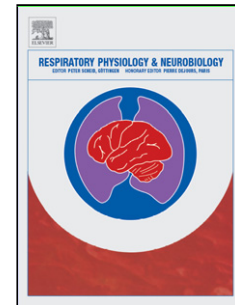


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Metabonomic profiling of chronic intermittent hypoxia in a mouse model

Stéphanie Conotte^a, Alexandra Tassin^a, Raphaël Conotte^b, Jean-Marie Colet^b, Karim Zouaoui Boudjeltia^c, Alexandre Legrand^{a*}

Laboratory of Respiratory Physiology, Pathophysiology and Rehabilitation ^a, Laboratory of Human Biology and Toxicology ^b, Research Institute for Health Sciences and Technology, University of Mons, Mons, Belgium; Laboratory of Experimental Medicine (ULB 222 Unit), Medicine Faculty, Université Libre de Bruxelles, CHU de Charleroi, Belgium ^c.

*Author to whom reprint requests should be addressed. Email: alexandre.legrand@umons.ac.be

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Address for correspondence:

Prof. A. Legrand

Lab. Respiratory Physiology and Rehabilitation, University of Mons

Avenue du Champ de Mars, 6

B-7000 Mons, Belgium

Tel : 32-65-373554; e-mail : alexandre.legrand@umons.ac.be

Highlights

- This first metabonomic urinary profiling in a Chronic intermittent hypoxia (ChIH) murine model allows a better understanding of systemic effects of this key component of obstructive sleep apnea (OSA) pathophysiology.
- ChIH, per se, is sufficient to induce an oxidative stress (OS) imbalance *in vivo*, followed by a modulation of antioxidant defence over time.
- Energy metabolism is modified by ChIH, with a switch towards anaerobic pathways, likely partly mediated by a transient activation of HIF1 α .
- Signs of a higher vitamin B3 production could be indicative of an increased need of coenzymes NAD⁺ and NADP⁺ regeneration upon exposure to ChIH.
- Hipurate, a marker of liver function, is modulated after a long-term exposure to ChIH.
- Trimethylamine N oxide (TMAO) and allantoin could constitute promising biomarkers in the context of cardiovascular risk and OS associated to OSA.

Abstract :

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