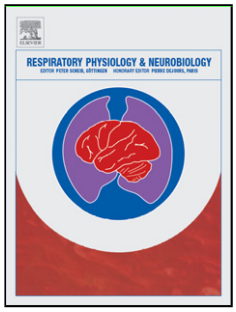


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# Metabonomic profiling of chronic intermittent hypoxia in a mouse model

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**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 HIF1α.
- Signs of a higher vitamin B3 production could be indicative of an increased need of coenzymes $NAD^+$ and $NADP^+$ regeneration upon exposure to ChIH.
- Hipurrate, a marker of liver function, is modulated after a long-term exposure to ChIH.
- Trimethylamine N oxide (TMAO) and allantoïn could constitute promising biomarkers in the context of cardiovascular risk and OS associated to OSA.

## Abstract :