

## **Supplementary Information**

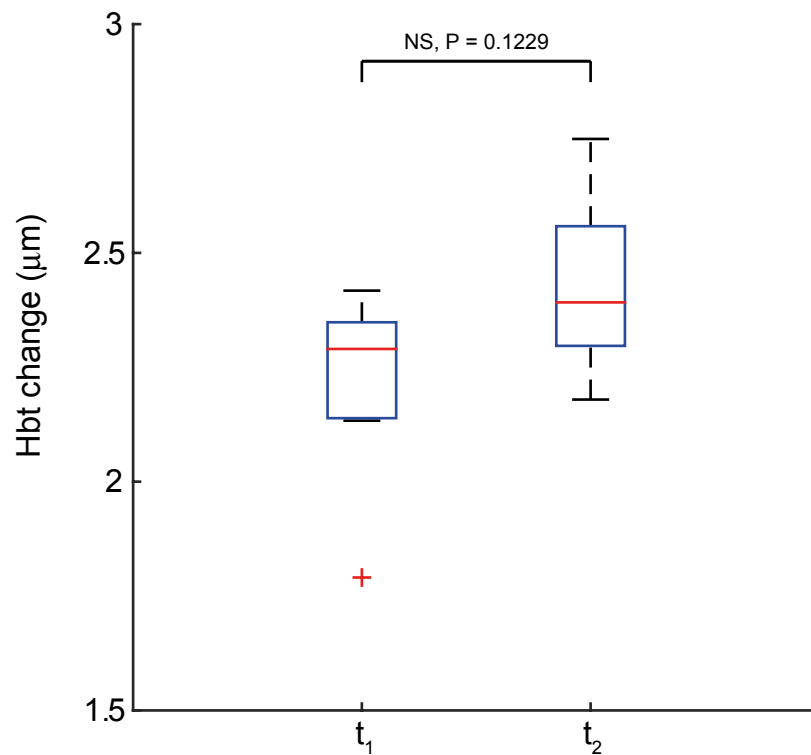
### **Comparison of stimulus-evoked cerebral hemodynamics in the awake mouse and under a novel anesthetic regime**

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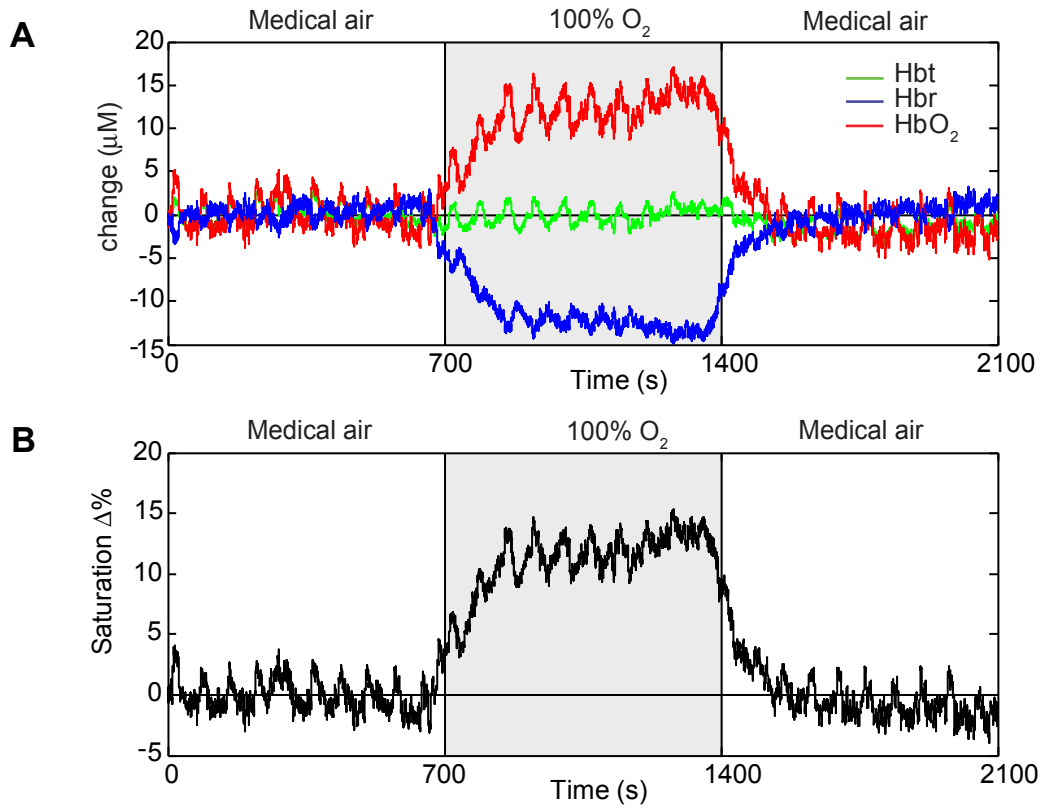
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**Supplementary Figure 1.** Box plots comparing the average Hbt response (median and interquartile range) in the active region during a 16 s whisker stimulation (5 Hz) at  $t_1$  (0-35 min) and at  $t_2$  (150 - 185 min). All mice ( $n = 6$ ) were under fentanyl-fluanisone/midazolam and isoflurane anesthesia (100%  $\text{O}_2$ ). NS, non-significant difference between  $t_1$  and  $t_2$ ; 2-tailed paired  $t$ -test.



**Supplementary Figure 2.** The effect of medical air on baseline hemodynamics. **(A)** Averaged time series ( $n = 4$ ) for Hbt, HbO<sub>2</sub>, Hbr. **(B)** Percentage change in hemoglobin saturation caused by increasing the levels of oxygen from 21% (medical air) to 100%.

<b>O<sub>2</sub> Saturation [%]</b>		<b>Heart rate [bpm]</b>		<b>Breathing rate [bpm]</b>	
100% O <sub>2</sub>	Medical air	100% O <sub>2</sub>	Medical air	100% O <sub>2</sub>	Medical air
<b>98.4</b> ± 0.1	<b>96.4<sup>***</sup></b> ± 0.3	<b>405.4</b> ± 9.0	<b>427.6<sup>*</sup></b> ± 10.2	<b>91.6</b> ± 5.0	<b>108.0<sup>**</sup></b> ± 3.2

**Supplementary Table 1.** The effect of medical air on systemic physiological parameters. All data are mean ± SEM (n = 5). Significant differences, 2-tailed, paired *t*-test, \*P < 0.04, \*\*P < 0.02, \*\*\*P < 0.002.