

**Supplemental Table 1.** The piglets' cerebral perfusion pressure at the lower limit of autoregulation (LLA) in the original studies.

<b>Study design and experimental group</b>	<b>LLA (mmHg)</b> Mean (SD)	<b>Citation</b>
<b>Figure 1, panel A</b>		
Sham normothermia	38 (8)	Lee, et al. Cerebral blood flow and cerebrovascular autoregulation in a swine model of pediatric cardiac arrest and hypothermia. <i>Crit Care Med</i> 2011; 10: 2337-45.
Sham hypothermia	39 (9)	
HI normothermia	41 (6)	
HI hypothermia	31 (6)	
<b>Figure 1, panel B</b>		
Sham sustained hypothermia	29 (8)	Larson, et al. Cerebrovascular autoregulation after rewarming from hypothermia in a neonatal swine model of asphyxic brain injury. <i>J Appl Physiol</i> 2013; 115:1433-42.
Sham hypothermia + rewarming	34 (7)	
HI sustained hypothermia	29 (10)	
HI hypothermia + rewarming	38 (11)	
<b>Figure 1, panel C (all normothermia)</b>		
Sham + 2 days recovery	41 (11)	Lee, et al. Noninvasive autoregulation monitoring in a swine model of pediatric cardiac arrest. <i>Anesth Analg</i> 2012; 114: 825-36.
HI + 1 day recovery	37 (8)	
HI + 2 days recovery	40 (5)	

HI, hypoxic-ischemic brain injury. SD, standard deviation. LDF, laser Doppler flowmetry.

**Supplemental Table 2.** Mean index values from cerebral perfusion pressure above or below the lower limit of autoregulation in 66 piglets.

Index	CPP above the LLA Mean (SD)	CPP below the LLA Mean (SD)
COH (CPP-HbT)	0.898 (0.045)	0.911 (0.049)
COH (MAP-rSO <sub>2</sub> )	0.856 (0.041)	0.907 (0.062)
COH (CPP-LDF)	0.875 (0.041)	0.919 (0.052)
COH (MAP-LDF)	0.869 (0.039)	0.918 (0.052)
COH (MAP-ICP)	0.671 (0.079)	0.763 (0.119)
COH (MAP-HbT)	0.669 (0.071)	0.758 (0.130)
Phase (CPP-HbT)	-0.453 (0.296)	0.311 (0.408)
Phase (MAP-rSO <sub>2</sub> )	0.146 (0.230)	0.599 (0.266)
Phase (CPP-LDF)	0.251 (0.366)	0.638 (0.336)
Phase (MAP-LDF)	0.303 (0.285)	0.638 (0.302)
Phase (MAP-HbT)	-0.270 (0.324)	0.437 (0.394)
Phase (MAP-ICP)	-0.229 (0.324)	0.497 (0.469)
COR (CPP-HbT)	-0.363 (0.251)	0.321 (0.369)
COR (MAP-rSO <sub>2</sub> )	0.145 (0.209)	0.547 (0.252)
COR (CPP-LDF)	0.234 (0.299)	0.597 (0.308)
COR (MAP-LDF)	0.257 (0.233)	0.606 (0.285)
COR (MAP-HbT)	-0.187 (0.218)	0.403 (0.328)
COR (MAP-ICP)	-0.157 (0.225)	0.419 (0.357)
Gain (CPP-HbT)	0.02 (0.10)	0.02 (0.12)
Gain (MAP-rSO <sub>2</sub> )	0.41 (0.61)	0.40 (0.51)
Gain (CPP-LDF)	4.38 (4.85)	4.46 (8.3)
Gain (MAP-LDF)	4.82 (5.31)	4.93 (8.02)
Gain (MAP-ICP)	0.23 (0.21)	0.24 (0.29)
Gain (MAP-HbT)	0.02 (0.10)	0.03 (0.13)

CPP, cerebral perfusion pressure; LLA, lower limit of autoregulation; SD, standard deviation; COH, coherence; HbT, near-infrared spectroscopy relative total tissue hemoglobin; rSO<sub>2</sub>, near-infrared spectroscopy regional oxyhemoglobin saturation; LDF, Laser Doppler flowmetry; MAP, mean arterial blood pressure; ICP, intracranial pressure; Phase, phase calculated in the frequency bandwidth of highest coherence; COR, correlation.

