

1 Online Figure 1
2 Cui et al.

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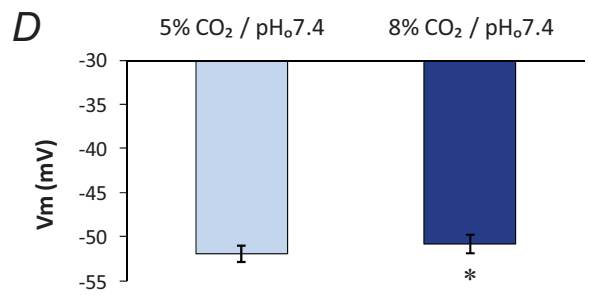
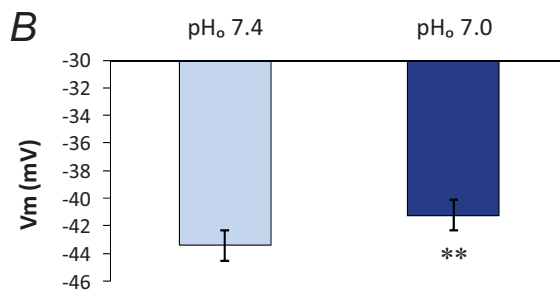
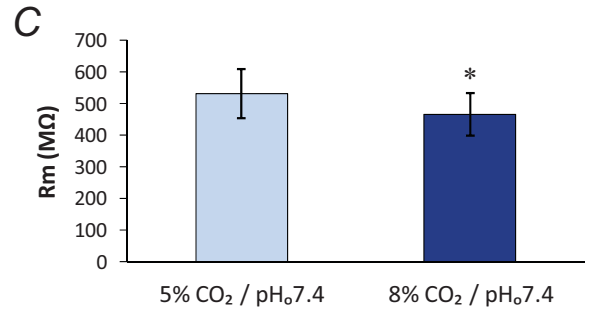
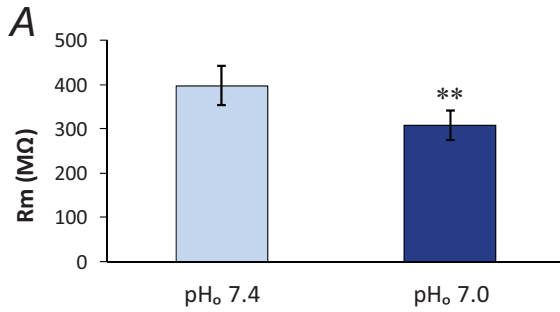
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16 **Online Figure 1.** Selective extracellular acidification caused a reduction in R_m (A) and
17 depolarization (B). **C,D.** Similar effects were produced by selective intracellular acidification with
18 pH_o 7.0 (*, $P < 0.05$; **, $P < 0.01$).

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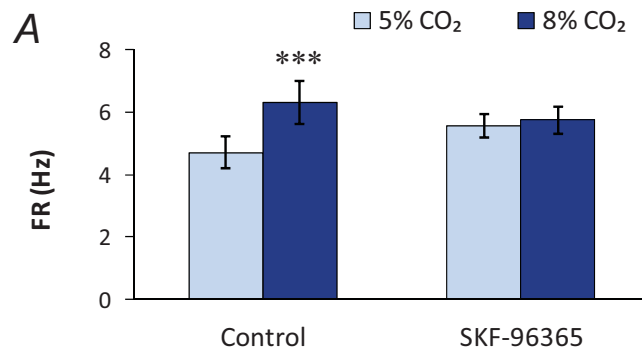
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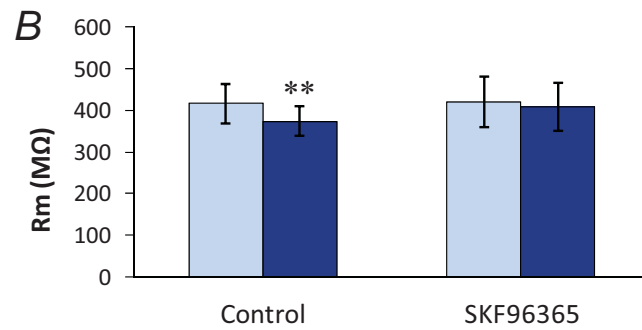
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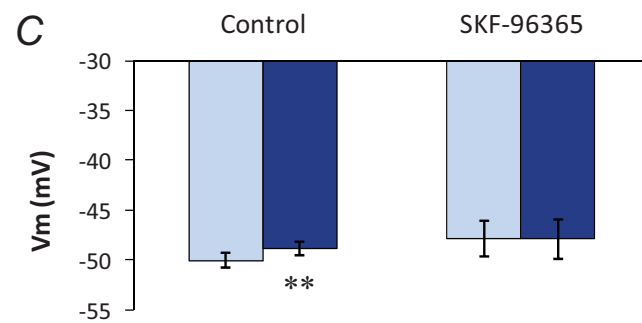
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44 **Online Figure 2.** LC neuronal responses to hypercapnia after synaptic blockade. The high CO₂
45 exposure remained to produce significant changes in FR, RM and Vm (n=7 cells; **, P<0.01; ***,
46 P<0.001). Such changes were abolished in the presence of 50μM SKF-86365 (n=4 cells). Data
47 are presented as means ± s.e.

48 Online Figure 3
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68 **Online Figure 3.** The effect of BAPTA on the CO₂ response of LC neurons. Although an
69 exposure to 8%CO₂ still augmented firing activity with 10 mM BAPTA in the pipette solution, the
70 firing rate changes were significantly reduced in comparison with the cell response in the
71 absence of BAPTA (*, P<0.05; ***, P<0.001; data are presented as means ± s.e, n=8 cells)

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