

**Arctic ground squirrel hippocampus tolerates oxygen glucose deprivation independent of hibernation season even when not hibernating and after ATP depletion, acidosis and glutamate efflux**

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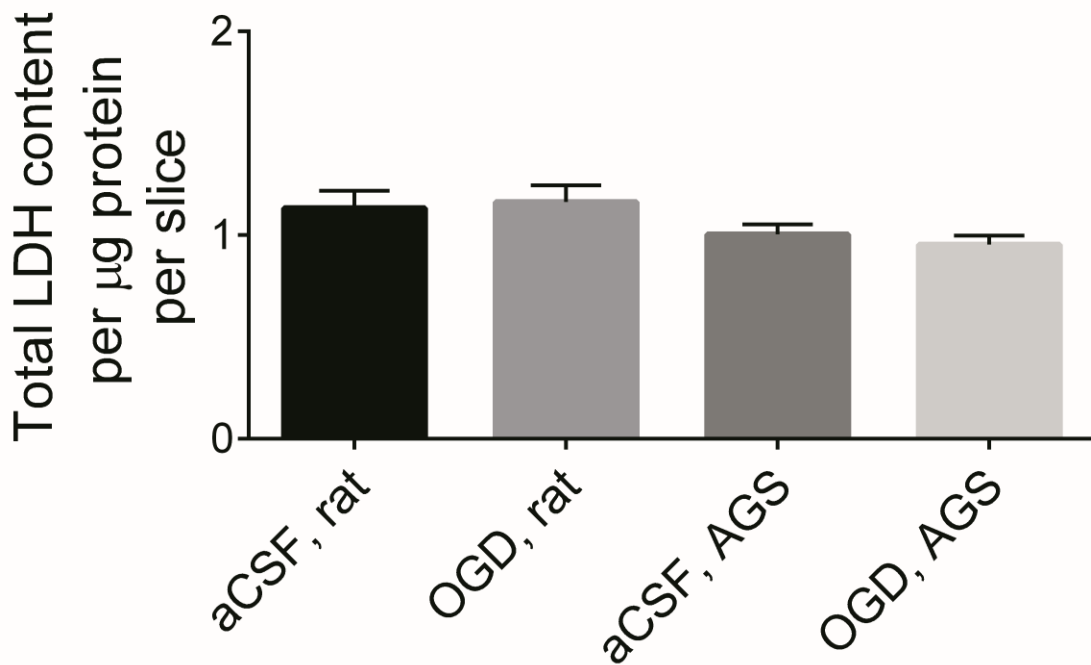
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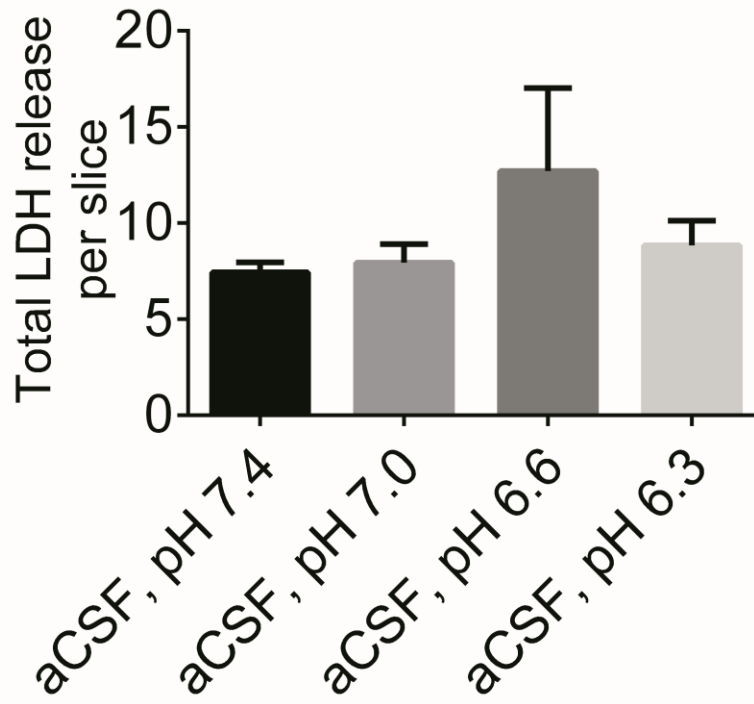
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**Supplementary Figure 1:**



Total LDH content per slice from rat (n= 15) and AGS (n= 34) subjected to 30 min of either aCSF or OGD treatment is not different. At the end of each experiment, slices were homogenized and total LDH content per slice was measured. Data shown are means  $\pm$  SEM.

**Supplementary Figure 2:**



Total LDH release per slice from *se*AGS subjected to a range of low pH insult (aCSF pH 7.4, n= 7; aCSF pH 7.0, n= 4; aCSF pH 6.6, n= 5; aCSF pH 6.3, n= 7; 15 animals) for 30 min. Total LDH release per treatment was normalized to baseline LDH release per mg of protein (Baseline values for LDH in arbitrary units per mg protein: aCSF pH 7.4 =  $0.218 \pm 0.0668$ ; aCSF pH 7.0 =  $0.300 \pm 0.0665$ ; aCSF pH 6.6 =  $0.240 \pm 0.0686$ ; aCSF pH 6.3=  $0.260 \pm 0.0302$ ). Data shown are means  $\pm$  SEM.

### **Supplementary Table 1:**

<b>Table1: Characteristics of study groups:</b>					
<b>Physiological Parameters</b>	<i>se</i> AGS	<i>ibe</i> AGS (20h)	<i>ibe</i> AGS (4h)	<i>h</i> AGS	Rat
<b>Age (days)</b>	Adult	Adult	Adult	Adult	87.60±25.45
<b>Sex</b>	Male (n= 10)	Male (n= 8)	Male (n= 1)	Male (n= 4)	Male (n= 14)
	Female (n= 4)	Female (n= 5)	Female (n= 2)	Female (n= 0)	Female (n= 1)
<b>Body Weight (g)</b>	1037.6±247.3	616.9±160.3	585.4±224.3	619.5±132.7	354.3±50.5
<b>T<sub>rectal</sub> (°C)</b>	36.7±1.4	36.1±0.8	36.6±0.6	4.5±1.2	36.6±0.9
<b>T<sub>temporalis</sub> (°C)</b>	35.9±1.1	35.6±0.8	35.8±0.6	5.7±1.5	35.7±0.4

### **Supplementary Table 2:**

Treatment Group	Baseline values for LDH absorbance (Arbitrary unit)
<b>Figure 1</b>	
rat aCSF	0.139 ± 0.015
rat OGD	0.189 ± 0.020
<i>se</i> AGS aCSF	0.204 ± 0.025
<i>se</i> AGS OGD	0.189 ± 0.01
4h <i>ibe</i> AGS OGD	0.262 ± 0.036
<i>h</i> AGS OGD	0.124 ± 0.010
20h <i>ibe</i> AGS OGD	0.208 ± 0.021
<b>Figure 2 (A)</b>	
rat, aCSF pH 7.4	0.183 ± 0.017
rat ISS pH 6.5	0.099 ± 0.019
<i>se</i> AGS, aCSF pH 7.4	0.213 ± 0.056
<i>se</i> AGS ISS pH 6.5	0.126 ± 0.003
<b>Figure 2 (B)</b>	
rat, aCSF pH 7.4	0.109 ± 0.0164
rat aCSF pH 6.3	0.209 ± 0.0397
<i>se</i> AGS, aCSF pH 7.4	0.218 ± 0.0668
<i>se</i> AGS ISS pH 6.5	0.126 ± 0.003
<i>se</i> AGS aCSF pH 6.3	0.260 ± 0.0302