

**Ischemia/Reperfusion Injury of Primary Porcine Cardiomyocytes in a Low-Shear
Microfluidic Culture and Analysis Device**

Grishma Khanal¹, Kiyong Chung², Ximena Solis-Wever¹, Bradley Johnson², Dimitri
Pappas^{*1}

¹Department of Chemistry and Biochemistry, ²Department of Animal and Food Science,
Texas Tech University, Lubbock, TX 79409

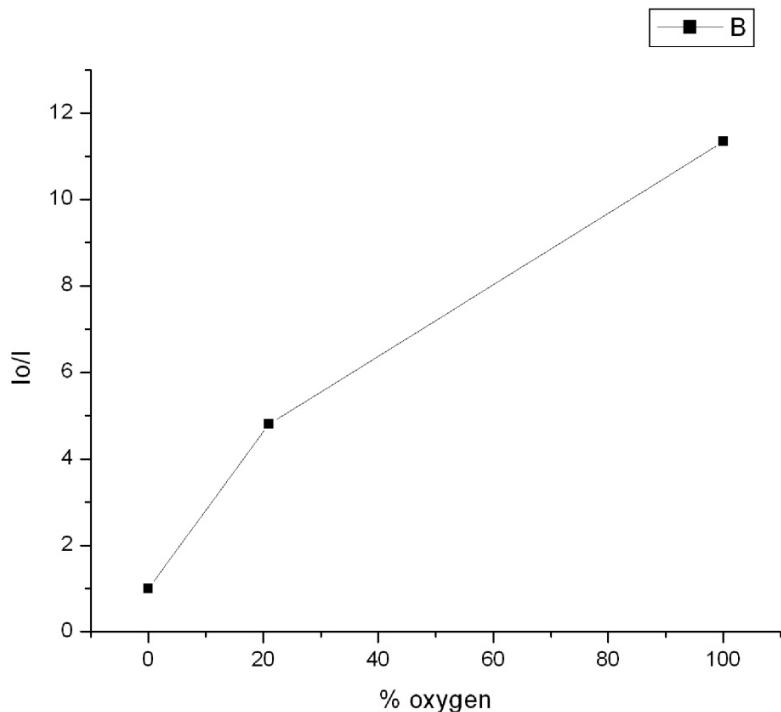


Figure SI1. Response of the O₂ sensitive dye using three calibration gases (N₂, Air, and O₂). The response curve was used to assess that hypoxia was induced (<1% O₂) after 30 minutes of N₂ flow.

Time(hrs)	Percentage of apoptotic cells
0	5.33
1	15.49
2	12.00
3	4.69
4	11.25
5	20.34
5 hours of hypoxia + 1 hour reperfusion	44.26

Table SI1: Percentage of depolarized mitochondria (determined as the number of cells with minimum MTR signal counts). There is a steady growth of number of depolarized cells as the hypoxia period is increased till 5 hours after which 1 hour of normoxia period is established.