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OPEN ACCESS

APPROVED BY Frontiers Editorial Office, Frontiers Media SA, Switzerland

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SPECIALTY SECTION This article was submitted to Cell Death and Survival, a section of the journal Frontiers in Cell and Developmental Biology

RECEIVED 07 December 2022 ACCEPTED 08 December 2022 PUBLISHED 05 January 2023

CITATION

Wong JJY, Varga BV, Káradóttir RT and Hall EAH (2023), Corrigendum: Electrochemically induced *in vitro* focal hypoxia in human neurons. *Front. Cell Dev. Biol.* 10:1118466. doi: 10.3389/fcell.2022.1118466

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Corrigendum: Electrochemically induced *in vitro* focal hypoxia in human neurons

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KEYWORDS

hypoxia, electrochemistry, microfluidic, human cortical neural progenitor, cortical neuron, axon, small vessel disease, lacunar infarct

A Corrigendum on

Electrochemically induced in vitro focal hypoxia in human neurons

by Wong JJY, Varga BV, Káradóttir RT and Hall EAH (2022). Front. Cell Dev. Biol. 10:968341. doi: 10.3389/fcell.2022.968341

In the published article, there was an error in Table 2 as published. This was due to a formatting error during publication causing rows to become misplaced in the final printed copy and subscript information to be lost.

The corrected Table 2 and its caption Experimental design appear below.

In the published article, there was an error in Table 3 as published. This was due to a formatting error during publication causing rows to become misplaced in the final printed copy.

The corrected Table 3 and its caption pH and H_2O_2 concentration under eLOS oxygen scavenging appear below.

Error in Table carried over to the index figure.

In the published article, there was an error in Index figure as published. This arose as a carry-over of the error in the formatting of the table that the publishers used as index figure A corrected index figure appears below corresponding to Figure 10 in the manuscript.

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

Experimental design	Experiment	Conditions/parallel experiments	Replicates
Characterisation of Pt/C	Oxygen adsorption	In ambient	3
	Oxygen adsorption	In nitrogen	3
	BET	In nitrogen	3
	Tafel plot	In nitrogen	3
	Oxygen concentration change	In nitrogen	3
eLOS hypoxia	Hypoxic response	Negative control	3
6 images randomly taken with minimum 100 cells each; minimum 1,000 cells per replicate	Hypoxic response	Time conditions	3 each
	Hypoxic response	Positive control (DMOG 250 µM)	3
	Acute hypoxia	Negative control	3
	Acute hypoxia	Time conditions	3
	Focal hypoxia	Negative control	3
	Focal hypoxia	Position conditions	3
	Focal hypoxia	Positive control	3
Apoptosis study	pH change	Different solutions	3 each
	H ₂ O ₂ generation	Different solutions	3 each
	hNPC apoptosis	Negative control	3
	hNPC apoptosis	H ₂ O ₂ concentrations	3 each
	hNPC apoptosis	Positive control (Staurosporine 100 nM)	3
Neuron focal hypoxia	Hypoxia at microchannel device	Positional conditions	3
	Cortical neuron model	Negative control	4
	Cortical neuron model	Focal hypoxia conditions	4 each
	Cortical neuron model	Bulk hypoxia	4

TABLE 3 pH and H_2O_2 concentration under eLOS oxygen scavenging.

Scavenging conditions $(n = 3)$	Measurand		Time (mins)	
		0	30	180
PBKCl	рН	7.3 ± 0.1	7.3 ± 0.1	7.3 ± 0.1
PBKCl	[H ₂ O ₂]	Negative	$0.8 \pm 0.3 \ \mu M$	$0.8 \pm 0.3 \ \mu M$
PBKCl with catalase	рН	7.3 ± 0.1	7.3 ± 0.1	7.2 ± 0.1
PBKCl with catalase	[H ₂ O ₂]	Negative	Negative	Negative
DMEM/F-12	рН	7.6 ± 0.1	$\begin{array}{c} 7.6 \pm 0.1 \\ 0.8 \pm 0.3 \; \mu M \end{array}$	7.6 ± 0.1
DMEM/F-12	[H ₂ O ₂]	Negative		Trace amount
DMEM/F-12 with catalase	рН	7.4 ± 0.1	7.4 ± 0.1	7.4 ± 0.1
DMEM/F-12 with catalase	[H ₂ O ₂]	Negative	Negative	Negative



Focal hypoxia in a human cortical neuron microchannel model. (A) Schematic presentation of the microchannel model. Representative confocal tile image of neurons growing across the microchannels. Cyan: cell nucleus; green: axons. (B) Representative confocal image of cell nucleus (cyan) at the end chambers and axons in the central chamber after hypoxic insults. (C) Quantitative analysis of cells with chromatin condensation (n = 4).

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