S1 Table. Variability of relative peak sizes in microelectrode-recorded CC CAPs.

Variability of relative sizes of two major negative peaks, N1 and N2 (myelinated and non-myelinated, respectively) in published compound action potentials (CAPs) recorded with field microelectrodes in mouse and rat corpus callosum

Fig 1, d=2mm 21-23°C***** Fig 3Bi,Ci, d=2mm ?°C NA 2004[3] Fig 3**, d=2mm 33.5 ME: 3M NaCl, 1-3 MΩ ME: 3M NaCl, 1-3 MΩ ME: 2M NaCl Crawford et al 2009b[2] Fig 2,3Ai, d=2mm 21-23°C Patel et al 2013[4] Crawford et al 2009b Crawford et al 2009b Sahel et al 2015[5] Fig 1, d=2mm 21-23°C 21-23°C? 21-23°C***** ME: 3M NaCl, 1-3 MΩ ME: 3M NaCl ME: 3M NaCl, 1-3 MΩ Sahel et al 2015[5] Tekkok et al 2005[6] Fig 1, d=2mm 33°C? ME: glass pipette, no details ME: 2M NaCl ME: 3M NaCl ME: glass pipette, no details Ruff et al 2013[7] Ritter 2012[8] Fig 2, d=2**11 Fig 3, d=2**11 Fig 2, d=2mm 21-23°C NACl ME: glass pipette, no details ME: 2M NaCl ME: ACSF, 1 MΩ Value Corcoba et al 2015 [9] Tekkok & Goldberg Value Corcoba et al 2015 [9] Fig 2**, d=? 33°C ME: 27? ME: 2M NaCl Tekkok et al 2005[11] Fig 2**, d=? 33°C ME: 2M NaCl Ziskin et al 2007 [12] Fig 7, d=0.4.1.8mm 37 °C ME: ACSF, 1.5-2.5 MS Olmos-Serrano et al 2<	Species	N 1 > N 2	N1 ≈ N2	N1 < N2
Image: System in the image is a system in the im		Crawford et al 2009a[1]	Crawford et al 2009b[2]	Baltan-Tekkok & Ransom
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[13] Fig 6; d= varied4-poir recording; 25°C				ME: ACSF, 1.5-2.5 MΩ
Fig 6; d= varied4-poir recording; 25°C				Olmos-Serrano et al 2016
recording; 25°C				
25°C				Fig 6; d= varied4-point
				_
ME: ???. 1 MΩ				ΜΕ: ???. 1 ΜΩ

Species	N 1 > N 2	N1 ≈ N2	N1 < N2
	DiLeonardi et al 2012[14]	Baker et al 2002[15]	Colley et al 2010[16]
	Fig 1,2***, <mark>d=1mm</mark>	Fig 1,2, <mark>d=1 mm</mark>	Fig 1,2,4,5,6, <mark>d=1mm</mark>
	°C NA	36–37°C	22-23°C*****
	ME: ACSF? 6-8 MΩ?	ME: 150 mM NaCl, 2-3 M Ω	ME: ACSF? 6-8 MΩ?
	Park et al 2011[17]	Colley et al 2010[16]	Preston et al 1983[18]
	Fig 6, d=0.75mm	Fig 3, d=1mm	Fig 1C*,3B, 4A,4C,
	?°C−NA	22-23°C*****	d=3.3mm 37°C - in vivo
	ME: 150 mM NaCl, 2-3 M Ω	ME: ACSF, 6-8 M Ω	ME: 20-30 um, 0.5% agar
			in Ringer solution
			Desures et al 2005[40]
	Preston et al 1983[18]	Preston et al 1983[18]	Reeves et al 2005[19]
	Fig 1C*, d=3.3mm	Fig 1C*, d=3.3mm	Fig 1,2, d=1mm
	37°C - in vivo	37°C - in vivo	23°C*¶
Rats	ME: 20-30 um, 0.5% agar in	ME: 20-30 um, 0.5% agar in	ME: ACSF, 6-8 M Ω
ä	Ringer solution	Ringer solution	
	Zhang et al 2013[20]	Reeves et al 2005[19]	Reeves et al 2012[21]
	Fig 5, d=1-1.5mm	Fig 3, d=1mm	Fig 3,4, d=1.0–1.5mm
	30°C	23°C*¶	22–23°C
	ME: 2M NaCl, 1-4 M Ω	ME: ACSF, 6-8 M Ω	ME: ACSF, 2-8 M Ω
		Reeves et al 2012[21]	Schultke et al 2005[22]
		Fig 4, d=1.0–1.5mm	Fig 3, <mark>d=1mm</mark>
		22–23°C	37°C ("body temperature")
		ME: ACSF, 2-8 M Ω	ME: 150 mM NaCl, 2-3
			MΩ
			Swanson et al 1998[23]
			Fig 2,3, d=2-3mm
			35°C
			ME: ACSF, 0.8-1.5 MΩ

* Depending on position of recording microelectrode - rat cc in vivo (also has an N3 peak (Preston et al 1983 - Fig 1C[18]) - conduction distance 3.3 mm.

** Peak polarities apparently reversed

*** Immature rat. Good separation from stimulus artifact, despite 1 mm distance

**** Two stimulating electrodes, monopolar tungsten; Vc = D1-D2/L

***** Discussion: "... the short latency component, N1 in the biphasic callosal CAP was obscured by the stimulus artifact when the ACSF was near physiological temperature (35–37 °C) as previously confirmed by Reeves et al. (2005). When the recordings were performed with the ACSF at room temperature (21–23 °C), conduction was slowed enough to allow separation of the N1 component from the stimulus artifact. All subsequent recordings in our lab have been performed with the ACSF at room temperature..." ..." The CAP recordings at room temperature allow the separation of stimulus artifact from the fast conducting myelinating N1 component that is lost if the recordings are performed at 35–37 °C (Baker et al., 2002; Reeves et al., 2005)."

***** "Electrophysiological recording was conducted with slices at room temperature (22–23 °C), based on previous findings that this range was optimal for separate quantification of the myelinated and unmyelinated CAP components (Reeves et al., 2005)".

*¶ "During initial recording sessions, it was determined that the short-latency component (N1) in the biphasic callosal CAP was obscured by the stimulus artifact, when the bath temperature was near physiological (36°C) temperature. Quantification of N1 was facilitated by lowering the bath temperature to 23°C, slowing conduction sufficiently to allow separation of this waveform component from the stimulus artifact (Fig. 1C). Accordingly, the subsequent evaluation of the effects of injury on the callosal CAPs was conducted at 23°C."

*¶¶ two-microelectrode recording for measuring conduction velocity

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