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

Species	N 1 > N 2	N1 ≈ N2	N1 < N2
Mice	Crawford et al 2009a[1] Fig 1, d=2mm 21–23°C***** ME: 3M NaCl, 1-3 MΩ	Crawford et al 2009b[2] Fig 3Bi,Ci, d=2mm ?°C NA ME: 3M NaCl, 1-3 MΩ	Baltan-Tekkok & Ransom 2004[3] Fig 3**, d=2mm 33.5°C ME: 2M NaCl
	Crawford et al 2009b[2] Fig 2,3Ai, d=2mm 21–23°C ME: 3M NaCl, 1-3 MΩ	Patel et al 2013[4] Fig 1, d=2mm 21–23°C? ME: 3M NaCl	Crawford et al 2009a[1] Fig 2,3,4, d=2mm 21–23°C***** ME: 3M NaCl, 1-3 MΩ
	Sahel et al 2015[5] Fig 7D, d=?**** 33°C? ME: glass pipette, no details	Tekkok et al 2005[6] Fig 1**, d=? 33°C ME: 2M NaCl	Patel et al 2013[4] Fig 1, d=2mm 21–23°C? ME: 3M NaCl
		Ruff et al 2013[7] Fig 5, d=?*¶¶ 21–23°C ME: 150 mM NaCl	Ritter 2012[8] Fig 21, d=2mm ?°C NA ME: ACSF, 1 MΩ
		Corcoba et al 2015 [9] Fig 4, d=0.7 mm 28°C ME: ???	Tekkok & Goldberg 2001[10] Fig 2**, d=? 33°C 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 MΩ
			Olmos-Serrano et al 2016 [13] Fig 6; d= varied4-point recording; 25°C ME: ???. 1 MΩ

See next page for rat corpus callosum

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