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## Restoration of Calcium Influx Corrects Membrane Hyperexcitability in Injured Rat Dorsal Root Ganglion Neurons

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### Abstract

We have previously shown that a decrease of inward  $Ca^{2+}$  flux ( $I_{Ca}$ ) across the sensory neuron plasmalemma, such as happens after axotomy, elevates neuronal excitability. From this, we predicted that increasing  $I_{Ca}$  in injured neurons should correct their hyperexcitability, which we have tested during recording from A-type neurons in non-dissociated dorsal root ganglia after spinal nerve ligation, using an intracellular recording technique. When bath  $Ca^{2+}$  level was elevated to promote  $I_{Ca}$ , the afterhyperpolarization was decreased and repetitive firing was suppressed, which also followed amplification of  $Ca^{2+}$ -activated K<sup>+</sup> current with selective agents NS1619 and NS309. Lowered external bath  $Ca^{2+}$  concentration had opposite effects, similar to previous observations in uninjured neurons. These findings indicate that at least a part of the hyperexcitability of somatic sensory neurons after axotomy is attributable to diminished inward  $Ca^{2+}$  flux, and that measures to restore  $I_{Ca}$  may potentially be therapeutic for painful peripheral neuropathy.

*Implications Statement*: Restoring  $I_{Ca}$  in injured A-type sensory neurons leads to decreased neuronal excitability. Increasing inward  $Ca^{2+}$  flux may potentially be therapeutic for painful peripheral neuropathy.

#### Introduction

Various laboratories, including our own, have observed a decreased inward  $Ca^{2+}$  flux (I<sub>Ca</sub>) in axotomized somatic sensory neurons (1–5), which are also noted to be hyperexcitable (6,7). We have recently shown that suppression of I<sub>Ca</sub> in uninjured neurons produces changes that simulate axotomy, including a diminished duration and area of the afterhyperpolarization (AHP), a decreased current threshold for action potential (AP) initiation, and increased

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repetitive firing during sustained depolarization [cite companion paper]. From these observations, we speculate that depressing  $I_{Ca}$  should have less effect on injured sensory neurons in which prior loss of  $I_{Ca}$  would preclude this action. More importantly, these findings also predict that increasing  $I_{Ca}$  in injured sensory neurons will correct their aberrant hyperexcitability, which would have translational importance. Accordingly, we have tested the effects of manipulating  $I_{Ca}$  in sensory neurons from animals made hyperalgesic by peripheral nerve injury. Since activation of  $Ca^{2+}$ -dependent  $K^+$  current ( $I_{K(Ca)}$ ) is a critical downstream mechanism through which  $I_{Ca}$  regulates neuronal excitability (8–11), we additionally tested the response of injured neurons to agents that selectively increase  $I_{K(Ca)}$  through elevating the  $Ca^{2+}$  sensitivity of specific channel subtypes.

#### **Materials and Methods**

All procedures used in the study were approved by the Animal Resource Center of the Medical College of Wisconsin.

#### Animal Preparation

During isoflurane anesthesia (2% in oxygen), spinal nerve ligation (SNL) was performed on male Sprague-Dawley rats (200–300g) at the fifth lumbar (L5) and L6 levels with 6-0 silk ligature and distal transection, which was confirmed at the time of tissue harvest. Unlike the originally described method (12), paraspinous muscles and the adjacent articular process were not removed.

#### **Behavioral Testing**

Sensory responsiveness was tested using a method that we have validated for selective identification of neuropathic hyperalgesia (13). On 3 separate days in the second and third postoperative weeks, each hind surface was touched with a 22g spinal anesthesia needle with pressure adequate to indent the plantar skin. Tissue was harvested only from animals that displayed a hyperalgesia-type response with sustained paw lifting, shaking or licking (70% of the injured animals).

#### **Tissue Preparation and Electrophysiological Recording**

Methods are similar to those described previously [cite companion paper]. Briefly, ganglia were removed  $20\pm3$  days after surgery, a time at which hyperalgesia has fully developed (13). During anesthesia, the L5 DRG and attached dorsal roots were removed. After removal of the capsule, the DRG was secured in a recording chamber and perfused with 35°C artificial CSF (aCSF, in m<sub>M</sub>: NaCl 128, KCl 3.5, MgCl<sub>2</sub> 1.2, CaCl<sub>2</sub> 2.3, NaH<sub>2</sub>PO<sub>4</sub> 1.2, NaHCO<sub>3</sub> 24.0, glucose 11.0) aerated by 5% CO2 and 95% O2 to maintain a pH of 7.35. The dorsal roots were placed on stimulating electrodes for generation of conducted action potentials (APs). DRG somata were impaled with microelectrodes filled with  $2_{\rm M}$  potassium acetate (80–120 M $\Omega$ ) during microscopy using differential interference contrast optics and infrared illumination. Membrane potential was recorded using an active bridge amplifier (Axoclamp 2B, Axon Instruments, Foster City, CA), or discontinuous current clamp recording mode (2kHz switching) for recording voltage during current injection through the recording pipette. Data was digitized at 10kHz (discontinuous) or 20 kHz data acquisition and analysis (bridge; Digidata 1322A and Axograph 4.9, Axon Instruments).

APs measures (Fig. 1) included AP and AHP durations and the area under the curve for the AHP (AHParea), and slope of the ascending limb (dV/dt) determined from the differentiated trace. Input resistance was calculated from the hyperpolarization during 100ms current injection (0.5nA) (14). Voltage "sag" in response to hyperpolarization, attributable to the H-current (15), was quantified as the fractional return from the peak hyperpolarization during

100ms of 1.2nA hyperpolarization current injection. Rheobase was determined as the minimum current able to elicit an AP during incremental injection of depolarizing current (0.5–10nA for 100mS) directly to the soma through the recording electrode. The pattern of impulse generation was determined during depolarizing current steps beyond rheobase, at which neurons either continued to produce single APs or fired repetitively. The influence of bath  $Ca^{2+}$  level or drug upon AP firing pattern was measured at a depolarizing voltage that first produced a bath  $Ca^{2+}$  or drug-induced difference in the number of APs generated.

Neurons were classified by conduction velocity (CV) calculated from conducted distance and latency. Adequately stable C-type neuron (CV<1.5m/S) recordings were too few to report. Neurons with CV>15m/S were considered A $\alpha/\beta$ -type, and neurons with CV>1.5m/S but CV<10m/S were considered A $\delta$ -type. For neurons with CV between 10 and 15m/S, long AP duration was used to categorize the cells as A $\delta$ -types (14).

#### Ca<sup>2+</sup> current modulation

To test whether injury precludes responses to lowered  $I_{Ca}$ , we examined effects of lowering bath  $Ca^{2+}$  on L5 neurons after SNL (n = 14 A $\alpha/\beta$  and 12 A $\delta$ ). After baseline electrophysiologic parameters were measured in aCSF, ganglia were exposed by bath change to an identical external solution except for a lower  $Ca^{2+}$  concentration achieved by substituting  $CaCl_2$  with MgCl<sub>2</sub>, producing a measured  $Ca^{2+}$  concentration of 0.35 m<sub>M</sub>. This reduces  $I_{Ca}$  by to only 6% of baseline [cite companion paper]. Magnesium was added to a final concentration of 3.5m<sub>M</sub> in order to exclude the possible influence of changed surface charge (16), and to maintain a constant divalent cation effect on potassium channels (17). To test whether augmenting  $I_{Ca}$  reverses the effects of injury, SNL L5 neurons (n = 24 A $\alpha/\beta$  and 21 A $\delta$ ) were exposed to a bath  $Ca^{2+}$  level of 7m<sub>M</sub>. This solution elevates  $I_{Ca}$  by 35% [cite companion paper]. Effects were measured after a wash-in interval of 3 min.

To explore the mechanism of the action of increasing  $I_{Ca}$ , we sought out repetitively firing neurons to expose to the  $I_{K(Ca)}$  activators NS1619 (10µM), which selectively increases current through the large conductance (BK) channel (18,19), or NS309 (5µM), which increases current through the small conductance (SK) and intermediate conductance (IK) channel subtypes (20,21). These were delivered by a microperfusion technique from a pipette with a 10µm diameter tip that was positioned 200µ from the impaled neuron, and ejected continuously by pressure applied to the back end of the pipette (Picospritzer II, General Valve Corp, Fairfield, NJ). Preliminary experiments indicated an effective 5-fold dilution of pipette solution into the bath at the cell surface, so pipette concentrations of 50µM for NS1619 and 25µM NS309 were used.

All agents were purchased from Sigma-Aldrich Co. (St. Louis, MO).

#### **Data Analysis and Statistics**

Data are expressed as means  $\pm$  SD. The effect of bath changes was evaluated using paired Student's *t*-test to identify of significant drug effects in the context of natural variability between neurons under baseline conditions. Significance was accepted at *P*<0.05.

#### Results

#### Effects of injury

SNL rats from which tissue was harvested showed a greater frequency of hyperalgesia-type responses ipsilateral to the injury  $(34\pm6\%; n = 37)$  than a contemporaneous control group of animals that had only a midline lumbar skin incision and staple closure  $(1\pm1\%; n = 68, P<0.001)$ .

Although this study was not designed to determine the effects of injury on electrophysiological parameters, we note that, in comparison to a previously reported control group that was studied concurrently with the experiments reported here [cite companion paper], axotomized L5 neurons after SNL developed electrophysiological changes consistent with those shown in previous examination of the effects of injury (6), including decreased AP amplitude and upstroke velocity, increased AP duration, and decreased AHP.

#### Decreasing I<sub>Ca</sub> in injured neurons

We predicted that the injury-related loss of  $I_{Ca}$  should preclude effects of further decreasing  $I_{Ca}$  by bath  $Ca^{2+}$  withdrawal in axotomized neurons. In fact (Table 1), low bath  $Ca^{2+}$  produced significant decreases in AHP dimensions and in rheobase that resembled changes seen in uninjured neurons [cite companion paper] and exceeded them in magnitude. Lowering bath  $Ca^{2+}$  also decreased AP amplitude in axotomized  $A\alpha/\beta$  neurons, but not in A $\delta$  neurons, and inflection disappeared in 3 of 8 neurons, which is also similar to the effect observed in control neurons. A tendency for increased firing during depolarization was demonstrated, as 5 neurons showed increased firing, 18 were unchanged, and 1 fired less. Unlike control neurons, axotomized neurons showed no decrement in hyperpolarization-induced voltage sag during  $Ca^{2+}$  withdrawal in both  $A\alpha/\beta$  and  $A\delta$  neurons.

#### Increasing ICa in injured neurons

We next tested the hypothesis that certain aspects of abnormal membrane behavior of axotomized neurons might be repaired by increased  $I_{Ca}$ . During elevation of bath  $Ca^{2+}$  (Table 1; Fig. 2),  $A\alpha/\beta$  and  $A\delta$  neurons from the fifth lumbar DRG following SNL developed increased AHP amplitude, AHP area, and rheobase, reversing the effects produced by injury (6). Also, the number of APs during sustained depolarization decreased in all repetitively firing injured neurons during high bath  $Ca^{2+}$ . Specifically, the average number of APs in repetitively firing  $A\alpha/\beta$  neurons decreased from  $4.1\pm0.8$  to  $2.0\pm0.5$  (P<0.01, n = 10), and the number of APs in repetitively firing A $\delta$  neurons decreased from  $3.0\pm0.9$  to  $2.1\pm0.8$  (P<0.05, n = 10), indicating the stabilization of these injured neurons by increased  $I_{Ca}$  (Fig. 3). All of the accommodating, single firing neurons, increasing  $I_{Ca}$  with elevated bath  $Ca^{2+}$  concentration slowed the conduction velocity. This demonstrates that the decrease in conduction velocity caused by injury cannot be attributed to injury-induced loss of  $I_{Ca}$ , but instead is probably due to a shift in the balance of various sodium current subtypes (22).

#### Increasing IK(Ca) in injured neurons

Both  $I_{K(Ca)}$  enhancers NS309 and NS1619 produced effects that resembled exposure to high bath Ca<sup>2+</sup> and reversed changes that follow injury (Table 2). Specifically, stimulation of SK and IK-type Ca<sup>2+</sup>-activated K<sup>+</sup> channels with NS309 increased the rheobase, expanded the AHP, and caused all 7 repetitively firing neurons (4 Aa/ $\beta$ , 3 A $\delta$ ) to fire less during depolarization (3.29±1.60APs at baseline, 1.14±0.38APs during NS309, *P*<0.01; Fig. 4). Stimulation of BK-type Ca<sup>2+</sup>-activated K<sup>+</sup> current with NS1619 also increased the rheobase, but did not increase AHP dimensions, consistent with its action on the earliest part of the repolarization phase (11). Like exposure to high bath Ca<sup>2+</sup>, NS1619 decreased the number of APs during neuron depolarization in all 8 repetitively firing neurons (6 Aa/ $\beta$ , 2 A $\delta$ ; 3.50±2. 10APs at baseline, 1.63±0.92APs during NS1619, *P*<0.01).

#### Discussion

Our results show that elevation of extracellular  $Ca^{2+}$ , which increases  $I_{Ca}$ , reverses the loss of AHP and elevated excitability of sensory neurons that follows peripheral nerve trauma. We, as well as others, have previously demonstrated a loss of  $I_{Ca}$  in axotomized primary sensory

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neurons, so the present observations support a role for this I<sub>Ca</sub> loss in generating post-traumatic hyperexcitability.

In contrast with our expectations, axotomized L5 neurons after SNL still respond to depression of  $I_{Ca}$  with elevated indices of excitability, including a decreased current necessary for AP initiation (rheobase), decreased AHP dimensions, and an associated increased propensity for repetitive firing. This may be explained by a heightened sensitivity to further loss of  $I_{Ca}$  due to the already deficient  $I_{Ca}$  due to injury. This is supported by a prior study of dissociated sensory neurons in which hyperexcitability developed in axotomized neurons when intracellular  $Ca^{2+}$  levels were buffered at a low level, while this did not occur with control neurons (23).

Calcium that enters through neuronal plasmalemmal  $Ca^{2+}$  channels has numerous regulatory functions, including the modulation of firing patterns by activation of  $I_{K(Ca)}$  and generation of the AHP. We previously demonstrated expression of  $I_{K(Ca)}$  currents sensitive to blockers of BK, IK, and SK types of  $I_{K(Ca)}$  rat DRG neurons (24). In the present experiments, we tested the role  $I_{K(Ca)}$  as a downstream effector by which increased inward  $Ca^{2+}$  flux may depress excitability, using agents that directly enhance current through these channels. The results were similar to elevating  $I_{Ca}$ , including enhanced AHP and diminished repetitive firing. Also, similar to increased  $I_{Ca}$  during elevated bath  $Ca^{2+}$ , enhanced  $I_{K(Ca)}$  increased rheobase, which indicates a depressed neuronal tendency to trigger an initial AP. This effect is possibly due to the enhanced  $I_{K(Ca)}$  competing with the inward depolarizing currents during the nascent initial phase of AP generation (Fig. 4).

Our previous observations indicate that axotomy is associated with both diminished  $I_{Ca}$  (1–3) and a loss of recruitable  $Ca^{2+}$ -activated K<sup>+</sup> channels (24) in sensory neurons. Our findings in the present study indicate that neuronal function after injury may be returned towards normal by elevating  $I_{Ca}$ , which may act through amplification of  $I_{K(Ca)}$ . These findings imply that measures designed increase inward  $Ca^{2+}$  flux in sensory neurons may provide analgesia following peripheral nerve trauma. Enhanced function of  $Ca^{2+}$  channels through rapidly advancing molecular technology may be one path to achieve this goal.

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#### References

- McCallum JB, Kwok WM, Mynlieff M, et al. Loss of T-type calcium current in sensory neurons of rats with neuropathic pain. Anesthesiology 2003;98:209–216. [PubMed: 12502999]
- McCallum JB, Jednacak K, Seagard JL, Hogan QH. Loss of ICa in sensory neurons after spinal nerve ligation and sham surgery. Society for Neuroscience Abstracts. 2002
- 3. Hogan QH, McCallum JB, Sarantopoulos C, et al. Painful neuropathy decreases membrane calcium current in mammalian primary afferent neurons. Pain 2000;86:43–53. [PubMed: 10779659]
- 4. Baccei ML, Kocsis JD. Voltage-gated calcium currents in axotomized adult rat cutaneous afferent neurons. Journal of Neurophysiology 2000;83:2227–2238. [PubMed: 10758131]
- Abdulla FA, Smith PA. Axotomy- and autotomy-induced changes in Ca2+ and K+ channel currents of rat dorsal root ganglion neurons. Journal of Neurophysiology 2001;85:644–658. [PubMed: 11160500]
- Sapunar D, Ljubkovic M, Lirk P, et al. Distinct membrane effects of spinal nerve ligation on injured and adjacent dorsal root ganglion neurons in rats. Anesthesiology 2005;103:360–376. [PubMed: 16052119]
- Abdulla FA, Smith PA. Axotomy- and autotomy-induced changes in the excitability of rat dorsal root ganglion neurons. Journal of Neurophysiology 2001;85:630–643. [PubMed: 11160499]

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- Bahia PK, Suzuki R, Benton DC, et al. A functional role for small-conductance calcium-activated potassium channels in sensory pathways including nociceptive processes. J Neurosci 2005;25:3489– 3498. [PubMed: 15814779]
- 9. Amir R, Devor M. Spike-evoked suppression and burst patterning in dorsal root ganglion neurons of the rat. Journal of Physiology 1997;501:183–196. [PubMed: 9175002]
- Viana F, Bayliss DA, Berger AJ. Multiple potassium conductances and their role in action potential repolarization and repetitive firing behavior of neonatal rat hypoglossal motoneurons. Journal of Neurophysiology 1993;69:2150–2163. [PubMed: 8350136]
- Scholz A, Gruss M, Vogel W. Properties and functions of calcium-activated K+ channels in small neurones of rat dorsal root ganglion studied in a thin slice preparation. Journal of Physiology 1998;513:55–69. [PubMed: 9782159]
- Kim SH, Chung JM. An experimental model for peripheral neuropathy produced by segmental spinal nerve ligation in the rat. Pain 1992;50:355–363. [PubMed: 1333581]
- Hogan Q, Sapunar D, Modric-Jednacak K, McCallum JB. Detection of neuropathic pain in a rat model of peripheral nerve injury. Anesthesiology 2004;101:476–487. [PubMed: 15277932]
- Villiere V, McLachlan EM. Electrophysiological properties of neurons in intact rat dorsal root ganglia classified by conduction velocity and action potential duration. Journal of Neurophysiology 1996;76:1924–1941. [PubMed: 8890304]
- Scroggs RS, Todorovic SM, Anderson EG, Fox AP. Variation in IH, IIR, and ILEAK between acutely isolated adult rat dorsal root ganglion neurons of different size. Journal of Neurophysiology 1994;71:271–279. [PubMed: 7512627]
- Hille, B. Ion Channels of Excitable Membranes. Vol. 3rd ed.. Sunderland, MA, USA: Sinauer Associates; 2001.
- Mayer ML, Sugiyama K. A modulatory action of divalent cations on transient outward current in cultured rat sensory neurones. Journal of Physiology 1988;396:417–433. [PubMed: 2457691]
- Olesen SP, Munch E, Moldt P, Drejer J. Selective activation of Ca(2+)-dependent K+ channels by novel benzimidazolone. Eur J Pharmacol 1994;251:53–59. [PubMed: 8137869]
- Zhang XF, Gopalakrishnan M, Shieh CC. Modulation of action potential firing by iberiotoxin and NS1619 in rat dorsal root ganglion neurons. Neuroscience 2003;122:1003–1011. [PubMed: 14643767]
- 20. Pedarzani P, McCutcheon JE, Rogge G, et al. Specific enhancement of SK channel activity selectively potentiates the afterhyperpolarizing current I(AHP) and modulates the firing properties of hippocampal pyramidal neurons. J Biol Chem 2005;280:41404–41411. [PubMed: 16239218]
- Strobaek D, Teuber L, Jorgensen TD, et al. Activation of human IK and SK Ca2+-activated K+ channels by NS309 (6,7-dichloro-1H-indole-2,3-dione 3-oxime). Biochim Biophys Acta 2004;1665:1–5. [PubMed: 15471565]
- Waxman SG, Dib-Hajj S, Cummins TR, Black JA. Sodium channels and pain. Proceedings of the National Academy of Sciences of the United States of America 1999;96:7635–7639. [PubMed: 10393872]
- Hilaire C, Inquimbert P, Al-Jumaily M, et al. Calcium dependence of axotomized sensory neurons excitability. Neurosci Lett 2005;380:330–334. [PubMed: 15862912]
- Sarantopoulos CD, McCallum JB, Rigaud M, et al. Opposing effects of spinal nerve ligation on calcium-activated potassium currents in axotomized and adjacent mammalian primary afferent neurons. Brain Res 2007;1132:84–99. [PubMed: 17184741]

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#### Figure 1.

Measurements determined from action potential (AP) trace. RMP, resting membrane potential; APamp., amplitude of AP; AP95%, duration of AP at 95% of amplitude; t, latency following axonal stimulation; AHPamp., amplitude of afterhyperpolarization; AHP80%, duration of afterhyperpolarization until 80% recovery to baseline.



3ms

#### Figure 2.

\*

Influence of elevating bath Ca<sup>2+</sup> concentration on an axotomized A $\alpha/\beta$  neuron. Elevation of bath Ca<sup>2+</sup> concentration from 2.3m<sub>M</sub> to 7m<sub>M</sub> increased the amplitude and area of the afterhyperpolarization (\*, blue trace).

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#### Figure 3.

Increased bath  $Ca^{2+}$  concentration diminishes repetitive firing during depolarization of an axotomized  $A\alpha/\beta$  sensory neuron. *A*. Under baseline conditions of 2.3 m<sub>M</sub> bath  $Ca^{2+}$  concentration, depolarizing current injection produces an initial single action potential, and further depolarization results in repetitive firing. *B*. Under high bath  $Ca^{2+}$  conditions (7m<sub>M</sub>), current injection results initially in no action potential and subsequently only a single action potential using comparable depolarization steps (*C*.) as in *A*.

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#### Figure 4.

NS309 ( $10\mu_{M}$ ), which enhances Ca<sup>2+</sup>-activated K<sup>+</sup> currents, reduces excitability in an axotomized Aa/ $\beta$  sensory neuron (different from the neuron in Figure 3), similar to the action of high bath Ca<sup>2+</sup>. *A*. Under baseline conditions, depolarizing current injection produces repetitive firing (red trace). *B*. During application of NS309, current injection results in only a single action potential (red) during comparable depolarization steps (*C*.) as in *A*. In both panels, a subthreshold current injection step induces an abortive depolarization that fails to produce a full action potential (green trace).

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Table 1

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bath Ca <sup>2+</sup> manif	oulation on ac	tive and passive r	membrane param	neters on axotomiz	ed sensory neuron	IS.				
RMP (mV)	CV (m/S)	APamp (mV)	AP95% (mS)	AHPamp (mV)	AHP80% (mS)	AHParea (mV•mS)	dV/dt (V/S)	$R_{in}\left(M\Omega\right)$	Sag ratio (%)	Rheobase (nA)
-65.3±8.1 -65.8±9.1	17.3±4.4 17.9±4.4	64.0±6.7 59.3±13.0	$1.15\pm0.35$ $1.20\pm0.65$	$9.1\pm3.5$ $8.0\pm3.7^*$	13.2±9.7 7.9±7.1**	89.0±62.3 53.6±44.9**	297±110 261±115	62.5±38.6 52.6±28.5	15.4±12.0 15.8±14.3	$2.3\pm1.5$ $1.8\pm1.2^{***}$
$-66.7\pm10.7$ $-69.8\pm10.7$	8.4±2.3 8.7±2.2* <i>u</i> V	73.3±16.2 72.9±13.1	1.76±0.48 1.65±0.65	9.5±3.1 8.8±4.2	29.0±34.0 9.5±3.5 <sup>*</sup>	196.2±174.8 78.4±38.7 <sup>**</sup>	279±139 259±112	89.4±66.8 118.5±107.5	$11.6\pm6.9$ $11.2\pm9.3$	$2.4\pm1.0$ $1.3\pm0.7^{**}$
-69.7±7.7 -69.1±7.9	estb estb estb estb estb estb estb estb	73.1±9.8 69.0±10.7 ***	$1.25\pm0.61$ $1.23\pm0.54$	$8.8\pm3.2$ $10.5\pm3.3^{***}$	18.4±20.9 17.2±18.2	141.0±146.0 168.2±167.4*	351±133 326±162*	63.9±55.6 76.0±87.2	21.9±15.6 20.6±13.2	$1.4 \pm 0.7$ $1.8\pm 1.0^{***}$
$-71.0\pm9.5$ $-66.7\pm9.2^{**}$	ath@s 880±1.5 880±1.5 880±1.5 880±1.5 80±1.	74.4±16.6 74.1±15.2	2.04±1.17 1.95±1.32	8.7±4.1 10.8±5.0 <sup>****</sup>	24.9±22.5 26.8±30.4	45± 50  99± 98 <sup>**</sup>	$254{\pm}107$ $232{\pm}87^{*}$	$133.1\pm121.8$ $105.5\pm95.2$	$11.9\pm11.8$ $10.1\pm10.9$	$1.1\pm0.7$ $1.4\pm0.9^{**}$
Baseline condition: R	ц. MP resting membr	ane notential: CV cond	Inction velocity: APam	maction potential ampliti	ude: AP95% action note	ntial duration at 95% of ampl-	inde:			

nplitude: *AHP80*% after the potentian at 80% of amplitude: *AHParea* afterhyperpolarization area under the curve; *dV/dt* maximum action potential upstrove and an and a structure and a stru

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ts of Ca <sup>2+</sup> .	ts of Ca <sup>2+</sup> .	ts of Ca <sup>2+</sup> .	s of Ca <sup>2+</sup> .	of Ca <sup>2+</sup> .	$C_{a}^{2+}$	7,92+.	2+	+		ctivated K <sup>+</sup> c	ctivated K <sup>+</sup> ci	ctivated K <sup>+</sup> cur	ctivated K <sup>+</sup> curre	ctivated K <sup>+</sup> curren	ctivated K <sup>+</sup> current	ctivated K <sup>+</sup> current e	ctivated K <sup>+</sup> current en	ctivated K <sup>+</sup> current enhs	ctivated K <sup>+</sup> current enhan	ctivated K <sup>+</sup> current enhanc	ctivated K <sup>+</sup> current enhance		- P
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<b>Table 2</b> ts of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1610	<b>Table 2</b> ts of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1610	<b>Table 2</b> ts of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1610	<b>Table 2</b> a of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1610	<b>Table 2</b> of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1610	Table 2 $^{2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1610	<b>Table 2</b> <sup>2a<sup>2+</sup>-activated K<sup>+</sup> current enhancers NS309 and NS1610</sup>	Table 2 <sup>12+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1610	Table 2       +-activated K <sup>+</sup> current enhancers NS309 and NS1610	Table 2     Stable 2     Stable 3     Stable 3	Table 2 irrent enhancers NS309 and NS1610	Table 2 rent enhancers NS309 and NS1610	Table 2 at enhancers NS309 and NS1610	Table 2 t enhancers NS309 and NS1610	Table 2 enhancers NS309 and NS1610	Table 2 nhancers NS309 and NS1610	Table 2 hancers NS309 and NS1610	Table 2 Incers NS309 and NS1610	Table 2 Cers NS309 and NS1619	Table 2 ers NS309 and NS1610	Table 2 s NS309 and NS1619	Table 2 NS309 and NS1619		č
Table 2 ts of $Ca^{2+}$ -activated $K^+$ current enhancers NS309 and NS1619	Table 2 ts of $Ca^{2+}$ -activated $K^+$ current enhancers NS309 and NS1619	Table 2       ts of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619	Table 2 To $\Gamma^{2^+}$ -activated $K^+$ current enhancers NS309 and NS1619	<b>Table 2</b> of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619	Table 2 $Ca^{2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619	Table 2 Table 2 $^{2^2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619	Table 2 $1^{2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619	Table 2       +-activated K <sup>+</sup> current enhancers NS309 and NS1619	Table 2 activated K <sup>+</sup> current enhancers NS309 and NS1619	Table 2       irrent enhancers NS309 and NS1619	Table 2       rent enhancers NS309 and NS1619	Table 2 attenhancers NS309 and NS1619	Table 2       t enhancers NS309 and NS1619	Table 2 enhancers NS309 and NS1619	Table 2 nhancers NS309 and NS1619	Table 2 hancers NS309 and NS1619	Table 2 incers NS309 and NS1619	Table 2 Cers NS309 and NS1619	Table 2 Prs NS309 and NS1619	Table 2 s NS309 and NS1619	Table 2 NS309 and NS1619		- 5
Table 2 ts of $Ca^{2+}$ -activated $K^+$ current enhancers NS309 and NS1619 $\alpha$	<b>Table 2</b> ts of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619 o	Table 2 ts of $Ca^{2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619 o	<b>Table 2</b> Tof $Ca^{2+}$ -activated $K^+$ current enhancers NS309 and NS1619 or	<b>Table 2</b> of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619 o	Table 2 $Ca^{2+}$ -activated $K^+$ current enhancers NS309 and NS1619 $\alpha$	<b>Table 2</b> <sup>7a<sup>2+</sup>-activated K<sup>+</sup> current enhancers NS309 and NS1619 o</sup>	Table 2 <sup>12+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619 or	Table 2       +-activated K <sup>+</sup> current enhancers NS309 and NS1619 or	<b>Table 2</b> activated K <sup>+</sup> current enhancers NS309 and NS1619 o	Table 2       Irrent enhancers NS309 and NS1619 or	Table 2 rent enhancers NS309 and NS1619 or	Table 2 at enhancers NS309 and NS1619 or	Table 2       t enhancers NS309 and NS1619 or	Table 2 enhancers NS309 and NS1619 or	Table 2 nhancers NS309 and NS1619 o	Table 2 hancers NS309 and NS1619 or	Table 2 mcers NS309 and NS1619 or	Table 2 Cers NS309 and NS1619 or	Table 2 Prs NS309 and NS1619 or	Table 2 s NS309 and NS1619 o	Table 2 NS309 and NS1619 or		2
<b>Table 2</b> ts of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619 on	Table 2 ts of $Ca^{2+}$ -activated $K^+$ current enhancers NS309 and NS1619 on	Table 2       ts of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619 on	Table 2 $\int Ca^{2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619 on	<b>Table 2</b> of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619 on	Table 2 $Ca^{2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619 on	Table 2 $^{2}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619 on	Table 2 <sup>12+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619 on	Table 2       +.activated K <sup>+</sup> current enhancers NS309 and NS1619 on	Table 2       activated K <sup>+</sup> current enhancers NS309 and NS1619 on	Table 2       irrent enhancers NS309 and NS1619 on	Table 2       rent enhancers NS309 and NS1619 on	Table 2 at enhancers NS309 and NS1619 on	Table 2       t enhancers NS309 and NS1619 on	Table 2 enhancers NS309 and NS1619 on	Table 2 phancers NS309 and NS1619 on	Table 2 hancers NS309 and NS1619 on	Table 2 mcers NS309 and NS1619 on	Table 2 Cers NS309 and NS1619 on	Table 2 Prs NS309 and NS1619 on	• NS309 and NS1619 on	Table 2 NS309 and NS1619 on		Ŧ
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Table 2 ts of $Ca^{2+}$ -activated $K^+$ current enhancers NS309 and NS1619 on function of ini	Table 2 ts of $Ca^{2+}$ -activated $K^+$ current enhancers NS309 and NS1619 on function of ini	Table 2 ts of $Ca^{2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of ini	<b>Table 2</b> Tof $Ca^{2+}$ -activated $K^+$ current enhancers NS309 and NS1619 on function of ini	Table 2 of $Ca^{2+}$ -activated $K^+$ current enhancers NS309 and NS1619 on function of ini	<b>Table 2</b> $Ca^{2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of ini	Table 2 $^{2^2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of ini	Table 2 <sup>12+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of ini	Table 2       +-activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of ini	<b>Table 2</b> activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of ini	Table 2       irrent enhancers NS309 and NS1619 on function of ini	Table 2       rent enhancers NS309 and NS1619 on function of ini	Table 2       and NS1619 on function of ini	<b>Table 2</b> t enhancers NS309 and NS1619 on function of ini	Table 2       enhancers NS309 and NS1619 on function of ini	Table 2 nhancers NS309 and NS1619 on function of ini	Table 2       bancers NS309 and NS1619 on function of ini	Table 2 meers NS309 and NS1619 on function of ini	Table 2 Cers NS309 and NS1619 on function of ini	Table 2 ers NS309 and NS1619 on function of ini	Table 2 s NS309 and NS1619 on function of ini	Table 2 NS309 and NS1619 on function of ini		- 2
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ts of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of initired doreal root vanchi	Table 2 ts of $Ca^{2+}$ -activated $K^+$ current enhancers NS309 and NS1619 on function of initired doreal root vanchic	ts of Ca <sup>2+_</sup> activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of initired dorcal root sanch	Table 2   s of Ca <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of injured dorsal root sanchic	Table 2 of $Ca^{2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of initired doreal root vanchic	Table 2 T $^{22+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of initred doreal root vanchic	Table 2 $^2a^{2+}$ -activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of injured doreal root sanch	<b>Table 2</b> 1 <sup>2+</sup> -activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of initured doreal root vanchi	Table 2       +-activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of injured dorsal root sanchic	<b>Table 2</b> activated K <sup>+</sup> current enhancers NS309 and NS1619 on function of initired dorcal root vanchi	Table 2       irrent enhancers NS309 and NS1619 on function of initired doreal root sanchic	Table 2 rent enhancers NS309 and NS1619 on function of initired dorsal root sandlic	<b>Table 2</b> at enhancers NS309 and NS1619 on function of injured doreal root sanchie	Table 2       t enhancers NS309 and NS1619 on function of initred doreal root vanalic	<b>Table 2</b> enhancers NS309 and NS1619 on function of injured doreal root sanchic	Table 2       nhancers NS309 and NS1619 on function of injured doreal root vanchic	Table 2     Participant     Partitant     Participant <th< td=""><td>Table 2 meers NS309 and NS1619 on function of initred doreal root vanalie</td><td>Table 2 Cers NS309 and NS1619 on function of initired dorsal root sanchi</td><td>Table 2       erc NS309 and NS1619 on function of initired doreal root sanchic</td><td><b>Table 2</b> s. NS309 and NS1619 on function of initired dorsal root sandlic</td><td>Table 2     NS309 and NS1619 on function of initired doreal root sanchic</td><th></th><td>2</td></th<>	Table 2 meers NS309 and NS1619 on function of initred doreal root vanalie	Table 2 Cers NS309 and NS1619 on function of initired dorsal root sanchi	Table 2       erc NS309 and NS1619 on function of initired doreal root sanchic	<b>Table 2</b> s. NS309 and NS1619 on function of initired dorsal root sandlic	Table 2     NS309 and NS1619 on function of initired doreal root sanchic		2
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	Effec	ts of Ca <sup>2+</sup> -acti	vated K <sup>+</sup> curr	ent enhancers N	S309 and NS161	9 on function of i	njured dorsal root	ganglion neurons.			
	Agent	RMP (mV)	CV (m/s)	APamp (mV)	AP95% (ms)	AHPamp (mV)	AHP80% (ms)	AHParea (mV•ms)	R <sub>in</sub> (MΩ)	Sag ratio (%)	Rheobase (nA)
β 11	BL NS309	$-63.5\pm7.5$ $-64.8\pm6.5$	$21.0\pm3.2$ $20.9\pm3.9$	58.6±9.8 58.9±10.1	1.67±0.36 1.65±0.36	8.5±3.9 8.9±3.5	$36 \pm 46$ $213 \pm 261$ *	$210\pm227$ $2007\pm2373^{*}$	114±25 115±29	18.3.0±9.3 18.9±10.6	$1.4\pm0.8$ $1.6\pm0.9^{**}$
~~ ~~	BL NS309	-64.3±3.1 -64.2±3.3	$9.4\pm3.0$ $9.5\pm3.0$	64.4±6.6 63.2±7.0	2.02±0.77 1.80±0.48	11.1±3.3 11.7±2.9	$127\pm162$ $406\pm260^{**}$	1321±912 2800±1020 <sup>**</sup>	$90.3\pm36.3$ $99.1\pm47.3$	16.0±11.5 19.3±9.0	2.2±1.3 2.5±1.4**
β/L	BL NS1619	-63.2±8.2 -63.2±8.2 -64.2±10.4	$20.7\pm7.6$ $20.4\pm7.9$	78.1 ±7.3 76.7±10.4	1.45±0.31 1.50±0.31 <sup>**</sup>	$11.1\pm1.7$ $10.1\pm2.0^{*}$	14.1±9.4 12.5±7.7	130±75 110±67*	68.2±32.9 62.6±33.5**	33.1±12.1 32.1±14.4	$0.6\pm0.3$ $0.9\pm0.4^{**}$
8	BL NS1619	-63.0±10.2 -66.1±8.8	$9.9\pm 3.2$ $9.7\pm 3.2^*$	79.8±13.0 79.9±15.1	$2.06\pm0.63$ $1.97\pm0.51$	11.7±3.4 12.1±3.8	27.6±25.5 20.6±17.7*	403±291 346±253*	85.6±40.2 99.8±44.6	19.0±19.1 19.6±17.8	$1.3\pm1.1$ $1.9\pm1.0^{***}$
ues are g a <i>mp</i> afi	iven as mean ± erhyperpolariz	ਤੋਂ. SD. BL Baseline co Rion amplitude; AF	ndition; <i>RMP</i> resti <i>HP80</i> % afterhyper	ng membrane potential polarization duration a	; <i>CV</i> conduction veloc it 80% of amplitude; <i>A</i>	ity; <i>AP amp</i> action poten <i>HP area</i> afterhyperpola	tial amplitude; <i>AP95</i> % irization area under the	action potential duration at 95 curve; <i>Rin</i> input resistance.	% of amplitude;		
0.05		lable in									
<0.01		1 PMC									
P < 0.00	1 vs. baseline.	2009									
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