

Carotid sinus nerve electrical stimulation in *conscious* rats attenuates systemic inflammation via chemoreceptor activation

Fernanda Machado Santos-Almeida^{1,*}; Gean Domingos-Souza^{1,*}; César A. Meschiari¹; Laura Campos Fávaro¹; Christiane Becari¹, Jaci A. Castania¹; Alexandre Lopes²; Thiago M. Cunha²; Davi J. A. Moraes¹; Fernando Q. Cunha²; Luis Ulloa³; Alexandre Kanashiro²; Geisa C. S. V. Tezini¹ & Helio C. Salgado¹.

¹Department of Physiology, Ribeirão Preto Medical School – University of São Paulo, Ribeirão Preto, 14049-900, Brazil. ²Department of Pharmacology, Medical School of Ribeirão Preto – University of São Paulo, Ribeirão Preto, 14049-900, Brazil.³Center of Immunology and Inflammation. Rutgers University – New Jersey Medical School, Newark, NJ 07103, USA.

Correspondence and requests for materials should be addressed to H.C.S. (email: hcsalgado@fmrp.usp.br).

*These authors contributed equally to this work.

Supplementary Figure S1

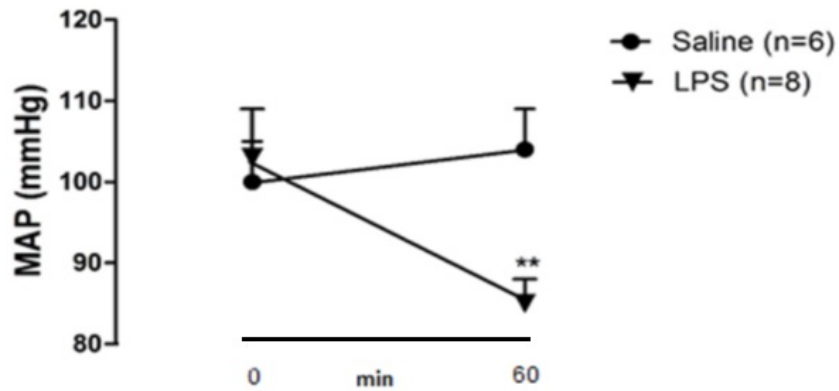


Figure S1. Mean arterial pressure (MAP) before (zero) and 60 minutes after intravenous administration of saline or *Escherichia coli* lipopolysaccharide (LPS). Data are expressed as the mean $\pm$ standard error of the mean; ** $p=0.01$ compared to saline. In parentheses the number of animals.

Supplementary Figure S2

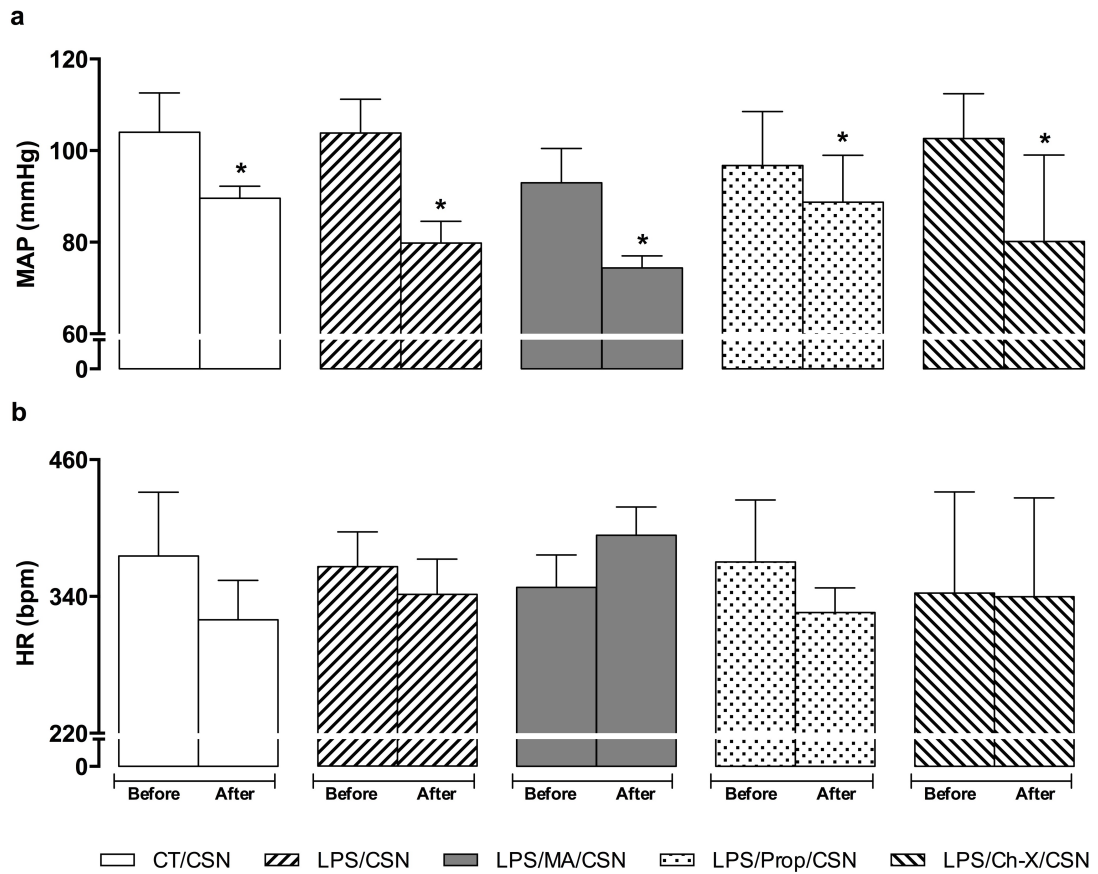


Figure S2. Hemodynamic responses [(MAP: mean arterial pressure; panel a) and HR: heart rate; panel b)] displaying the efficacy of electrical activation of the carotid sinus nerve in promoting a prompt fall in MAP in the different groups. **CT/CSN:** Control plus Carotid Sinus Nerve stimulation; n=5; **LPS/CSN:** Escherichia coli lipopolysaccharide (LPS) plus Carotid Sinus Nerve stimulation; n=7; **LPS/MA/CSN:** LPS plus Methylatropine administration and Carotid Sinus Nerve stimulation; n=5; **LPS/Prop/CSN:** LPS plus Propranolol administration and Carotid Sinus Nerve stimulation; n=5; **LPS/Ch-X/CSN:** LPS plus chemoreceptor denervation and Carotid Sinus Nerve stimulation; n=7. *Stimulation factor $p < 0.0001$.

Supplementary Figure S3

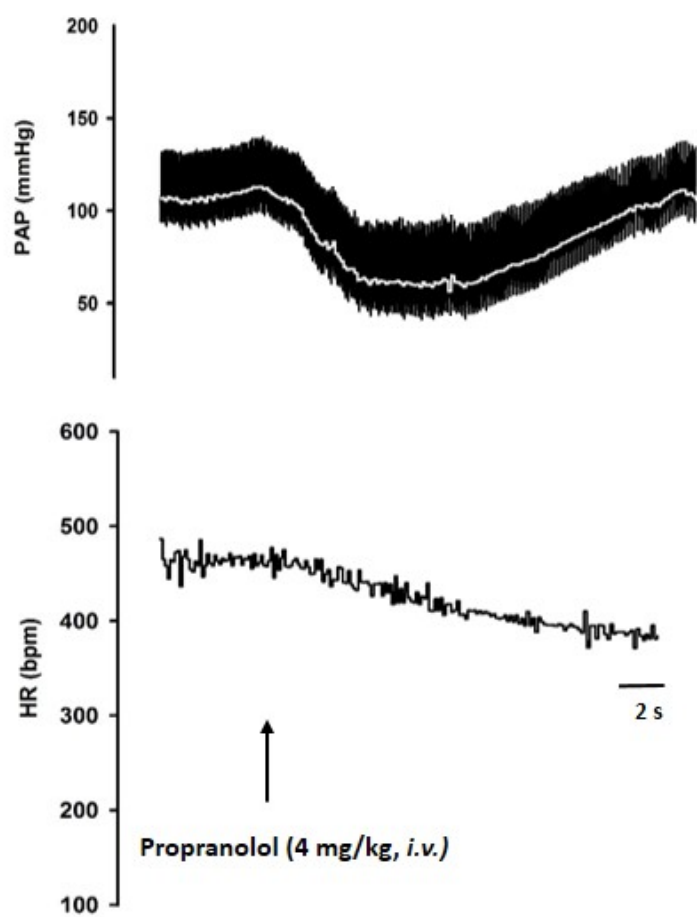


Figure S3. Tracings of pulsatile arterial pressure (PAP) [white line represents mean arterial pressure] and heart rate (HR) before and right after intravenous administration of propranolol in a conscious rat.