

CURRICULUM VITAE

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EDUCATION

M.D. (1991; School of Medicine, University of Buenos Aires, Argentina)

Ph.D. (1996; Department of Physiology, School of Medicine, University of Buenos Aires, Argentina)

PROFESSIONAL EXPERIENCE

2017-Present	Professor with tenure	Neuroscience Institute, Georgia State University, Atlanta, GA.
2017-Present	Director	Center for Neuroinflammation and Cardiometabolic Diseases, Georgia State University, Atlanta, GA.
2008-2017	Professor with tenure	Department of Physiology, Medical College of Georgia, Georgia Regents University, Augusta, GA
2004-2008	Associate Professor -tenure	Department of Psychiatry, University of Cincinnati, Cincinnati, OH
2003-2004	Associate Professor	Department of Pharmacology and Toxicology, Wright State University, Dayton, OH.
1999-2003	Assistant Professor	Department of Pharmacology and Toxicology, Wright State University, Dayton, OH.
1997-1998	Research Associate	Department of Anatomy and Neurobiology, University of Tennessee, Memphis.
1994-1996	Postdoctoral Fellow	Department of Anatomy and Neurobiology, University of Tennessee, Memphis. Advisor: Dr. William Armstrong, Ph.D.
1990-1994	Graduate Student	Department of Physiology, University of Buenos Aires, Argentina. Advisor: Dr. Daniel Cardinali, Ph.D.

PROFESSIONAL SOCIETIES

1994-Present	Society for Neuroscience
2000-Present	American Physiological Society
2010-Present	American Society of Neuroendocrinology
2010-Present	International American Society of Neuroendocrinology

PROFESSIONAL SERVICE

NATIONAL/INTERNATIONAL

Scientific Societies

2006-2014	American Physiological Society: Member of the Steering Committee, Central Nervous System Section
2008-2012	American Physiological Society: Section Program Committee Chair and Joint Program Committee Representative, Central Nervous System Section (2008- 2012).
2017-present	International Society of Autonomic Neuroscience: Executive member at large.

Editorial Boards

2006-2010	Experimental Physiology
2008-Present	American Journal of Physiology Regulatory Integrative and Comparative Physiology
2010-Present	Journal of Neuroendocrinology (2010-present)
2011-Present	Journal of Physiology- <i>Reviewing Editor</i>
2012-2015	American Journal of Physiology Regulatory Heart and Circulation
2012-Present	Molecular Metabolism

Grant Review Panels

2000	Welcome Trust (UK)
2001	IFCN2 Study Section, National Institutes of Health
2001	The Netherlands Organization for Scientific Research (NWO)
2001-2003	American Heart Association, Southern Consortium,
2006-2007	American Heart Association, National Center
2007-2010	NIH, Hypertension and Microcirculation study section, Ad hoc
2012	CONICET, Argentina
2013	Royal Society of New Zealand
2014	Ministry of Science, Technology and Productive Innovation, Argentina
2016	Czech Science Foundation, Czech Republic

Scientific Meetings

2002	Symposium Chair: "The hypothalamic PVN: Neuromodulatory Mechanisms in Autonomic Regulation", Experimental Biology Meeting, New Orleans.
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- 2006 **Symposium Chair:** “Activity-Dependent Plasticity in Central Homeostatic Systems” Experimental Biology Meeting, San Francisco.
- 2008 **Symposium Chair:** “ Donald J. Reis Memorial Trainee Symposium” Experimental Biology Meeting.
- 2009 **Feature Topic Chair:** “Emerging Signaling Mechanisms in CNS transmission and Plasticity” Experimental Biology Meeting.
- 2011 **Symposium Chair:** “Neuro-Glial-Vascular Mechanisms In The CNS Control of Autonomic Function”. International Society of Autonomic Neuroscience, Buzios, Brazil.
- 2012 **Symposium Chair:** “Degradation of neurovascular communication in disease: is it an inflammatory problem?” The Physiological Society Meeting, Edinburgh, Scotland
- 2013 **Symposium Chair:** “Central Mechanisms” World Congress on Neurohypophysial Hormones, Bristol UK.
- 2014 **Symposium Chair:** “Recent Advances in Hypothalamic Signaling Mechanisms in Health and Disease States”. Experimental Biology Meeting.
- 2014 **Symposium Chair:** “Novel Neuro-Glial Mechanisms Mediating Angiotensin II Actions in the Brain”. 1st PanAmerican Congress of Physiological Sciences, Iguassu Falls, Brazil.
- 2015 **Organizing Committee:** “Neural, Hormonal and Renal Interactions in Long-term Blood Pressure Control”. Mussoorie, India.
- 2015 Georgia Regents Research Institute (GRII) Distinguished Research award **Selection Committee**
- 2016 **Symposium Chair:** “Eavesdropping: Intimate Conversations of Neurons, Glia & Cerebral Blood Vessels”. FASEB summer conference: Neural Mechanisms in Cardiovascular Regulation, Saxton River, VT.
- 2017 Elected as the *Chair of the International Program Committee for the International Society of Autonomic Neuroscience* to be held in Nagoya, Japan.
- 2017 Elected as member of the *International Advisory Committee* for the World Congress of Neurohypophysial Hormones (WCNH 2017) to be held in Rio de Janeiro, Brazil.

Journal Reviewer (2000-present)

American Journal of Hypertension

American Journal of Physiology: Regulatory, Integrative and Comparative Physiology

Brain Research

European Journal of Neuroscience

Experimental Neurology

Experimental Physiology

Hypertension

Journal of Comparative Neurology
Journal of Pharmacology and Experimental Therapeutics
Journal of Physiology
Journal of Neuroendocrinology
Journal of Neurophysiology
Journal of Neuroscience
Nature Neuroscience
Nature Reviews Endocrinology
Neuron
Neuroscience
Progress in Biophysics and Molecular Biology

MEDICAL COLLEGE OF GEORGIA

2008-Present Member, Cardiovascular Discovery Institute Advisory Committee
2008-2011 Faculty Recruitment Committee- Department of Physiology
2009 Recruitment Committee: Chair, Basic Science, MCG-UGA Medical Partnership Campus
2009-2012 Member, Intramural Grants Program Review Committee
2010-Present Member, Department of Physiology Postdoctoral Development Committee
2011-Present Member, Imaging Core Facility Committee
2012-Present Chair, Departmental Seminar Series

UNIVERSITY OF CINCINNATI

2004-2008 Member, Institutional Animal Care and Use Committee

WRIGHT STATE UNIVERSITY

1999-2001 Member, Faculty Affairs Committee
2001-2004 Member, Research Committee
2001-2004 Member, Biomedical Science PH.D. Program Admissions Committee
2001-2004 Member, The Center for Brain Research, Wright State University
1999-2004 Chair, Departmental Seminar Series Program

HONORS AND AWARDS

2016 Carl Storm Underrepresented Minority (CSURM) Fellowship – Gordon Research Conferences.

2014 Distinguished Research award from the Georgia Regents Research Institute (GRII).

2014 Distinguished Research Graduate Faculty Award from the Graduate School at Georgia Research University.

2012 American Physiological Society / The Physiological Society (UK) Symposium Exchange Agreement. Selected symposium proposal to be presented at The Physiological Society annual meeting 2012.

- 2011 American Physiological Society, Latin-American Initiative Award. “Multidisciplinary Approaches for the Study of Neurogenic Hypertension: Recent theoretical and Experimental Advances” Graduate Course Buenos Aires Argentina.
- 2008 American Physiological Society, Latin-American Initiative Award. “Monitoring Central Control of Cardiovascular Function: From the Whole System to Individual Molecules” Graduate Course Sao Paulo, Brazil.
- 2006 Young Investigator Travel Award, International Society of Hypertension Meeting, Fukuoka, Japan.
- 2003 Presidential Award for Faculty Excellence: Early Career Achievement, Wright State University.
- 2002 Minority Young Scientist Travel Award American Society for Pharmacology and Experimental Therapeutics
- 2002 Award for Meritorious Research by a Young Investigator, The American Physiological Society - Water and Electrolyte Homeostasis Section.
- 2001 Research Career Enhancement Award. The American Physiological Society.
- 2001 Award for Meritorious Research by a Young Investigator. The American Physiological Society - Neural Control & Autonomic Regulation Section, 2001
- 2001 Travel Award: XXXIV International Congress of Physiological Society The American Physiological Society, 2001
- 1999 The Merck Sharp and Dohme Young Investigator Award “Nitric Oxide Modulation of Synaptic Transmission in Vasopressin Neurons” Stern, JE.
- 1999 Human Frontiers Science Program. Short Term Fellowship “Modulatory actions of the opioid-related peptide orphanin-FQ on supraoptic neurons”.
- 1994-1996 Postdoctoral Fellowship of The Neuroscience Center of Excellence, The University of Tennessee, Memphis (1994 -1996).
- 1992 Clinical Neurophysiology Award. The Argentine Medical Society The Argentine Society of Neuroscience, 1992.
- 1991-1993 Research Fellowship, National Research Council of Argentina (CONICET).

FUNDING

ACTIVE FUNDING

"Dendritic release of peptides: Role in bodily homeostasis"

Agency: National Institute of Health, R01

Period: 09/01/16 – 08/31/21

Role: PI (30% effort)

"Altered CNS intercellular signaling mechanisms in cardiovascular disease"

Agency: National Institutes of Health R01 competitive renewal

Period: 07/01/14 – 06/31/19

Role: PI (30% effort)

The goal of this project is to elucidate cellular mechanisms underlying enhanced Hypothalamic neuronal excitability in cardiovascular disease states. *This award received a 1% score.*

"Central neuronal-glia mechanisms and neurohumoral activation in hypertension"

Agency: National Institutes of Health, R01

Period: 06/01/2012-05/31/2017

Role: PI (23% effort)

The goal of this project is to study altered neuro-glia signaling mechanisms and their impact on hypothalamic neuronal function in hypertensive rats.

"Brain MAP Kinases – Substrate for Sympathetic Excitation in Heart Failure".

Agency: National Institute of Health, R01

Period: 04/01/16 – 03/31/20

Role: Co-I (10% effort) (PI: Dr. Robert Felder)

Sponsored Funding

"Ang II-TLR4 crosstalk promotes microglia activation and blood brain barrier disruption in neurogenic hypertension" Agency: American Heart Association, Scientist Development grant.

Period: 07/01/14-06/30/18

Role: Sponsor (PI: Biancardi, VC)

COMPLETED FUNDING (past 8 years only)

"CO regulation of hypothalamic neuronal activity in health and disease states"

Agency: National Institutes of Health, R21

Period: 04/01/13 – 1/31/15

Role: PI

The goal of this project is to study interactions between the gas molecules CO and NO in the regulation of central neuroendocrine and sympathetic neurons in heart failure rats.

"Altered CNS intercellular signaling mechanisms in cardiovascular disease"

Agency: National Institutes of Health

Period: 01/15/08 – 12/31/12

Role: PI

The goal of this project is to elucidate cellular mechanisms underlying enhanced Hypothalamic neuronal excitability in cardiovascular disease states.

“Central nervous system plasticity in sympathoinhibition in pregnancy”

Agency: National Institutes of Health, R01

Period: 04/01/2009 – 03/31/2014

Role: Co-PI (PI: Heesch C)

The goal of this project is to investigate the role of neurosteroids in influencing the regulation of sympathetic nerve activity during pregnancy.

“Brain neovascularization in diabetes”

Agency: National Institute of Health, R21

Period: 3/1/11-2/28/13

Role: Co-PI (PI: Ergul A)

The goal of this project is to study changes in brain vascular anatomy and function during diabetes.)

“Neuroendocrine regulation of adipocyte metabolism”

Agency: National Institutes of Health

Period: 04/08/2008-03/31/2013.

Role: (Co-PI) (PI: Dr. Tschoep)

The goal of this project is to elucidate mechanisms by which CNS neuroendocrine circuits regulate adipocyte metabolism.

"Hypothalamic Role in Hypertension"

Agency: National Institute of Health, R01

Period: 07/01/2002 – 04/30/08

Role: PI

The goal of this project is to elucidate signaling mechanisms contributing to elevated presympathetic neuronal activity in hypertension.

“Neuronal-Glial-Vascular signaling in the hypothalamus: Implications for cardiovascular diseases”

Agency: American Heart Association, Established Investigator Award

Period: 01/1/06-12/31/10

Role: PI

The goal of this project is to study mechanism underlying neuronal-vascular coupling in the hypothalamus during hypertension.

PUBLICATIONS (Peer Reviewed)

In Preparation

Pitra S, Meng Z, **STERN JE** Quantitative real-time measurement of activity-dependent dendritic release of neuropeptides using cell biosensors.

Published

Ferreira-Neto HC, Biancardi VC, **STERN JE** A reduction in SK channels contributes to increased activity of hypothalamic magnocellular neurons during heart failure. *J Physiol.* 2017 Jul 17. doi: 10.1113/JP274730. [Epub ahead of print]

Pitra S and **STERN JE**, An A-Type potassium channels mediate prorenin increase of firing activity in vasopressin neurosecretory neurons, *Am J Physiol Heart Circ Physiol*. Sep 1;313(3):H548-H557.2017.

Zhang M, Biancardi VC and **STERN JE**, An Enhanced Endogenous Extrasynaptic NMDA Receptor Tone Contributes to Diminished A-Type Current Function and Increased Excitability of Magnocellular Neurosecretory Neurons during Hypertension, *Journal of Physiology*, 2017 *In press*.

Yi CX, Walter M, Gao Y, Legutko B, Kalin S, Layritz C, Garcia-Caceres C, Bielohuby M, Bidlingmaier M, Woods SC, Ghanem A, Conzelmann K, **STERN JE**, Jastroch M, Tschop MH TNF α drives mitochondrial stress of POMC neurons in obesity. *Nature Communications*, 2017, *In press*.

Tsuji T, Allchorne A, Zhang M, Tsuji C, Tobin V, Pineda R, Raftogianni A, **STERN JE**, Grinevich V, Leng G, Ludwig M "Vasopressin casts light on the suprachiasmatic nucleus". *Journal of Physiology*, 2017, *In press*.

de Kloet A, Wang L, Pitra S, Hiller H, Smith J, Tan Y, Nguyen D, Cahill KM, Sumners C, **STERN JE**, Krause E. A unique angiotensin sensitive neuronal population coordinates neuroendocrine, cardiovascular and behavioural responses to stress. *Journal of Neuroscience*, 2017, Feb 20 *In press*.

STERN JE; Son, SJ; Biancardi VC; Zheng, H; Sharma, NM and Patel, KP Astrocytes Contribute to Angiotensin II Stimulatory Actions on Hypothalamic Presympathetic Neuronal Activity and Sympathetic Outflow, *Hypertension*, 68 (6): 1483-1493, 2016.

Pitra, S; Feng Y; **STERN JE**. Mechanisms Underlying Prorenin Actions on Hypothalamic Neurons Implicated in Cardiometabolic Control, *Molecular Metabolism*, 4; 5(10): 858-68, 2016.

De Kloet A*, Pitra MS*, Wang L, Hiller H, Pioquinto DJ, Smith JA, Sumners C, **STERN, JE**, Krause EG. Angiotensin Type-2 Receptors Influence the Activity of Vasopressin Neurons in the Paraventricular Nucleus of the Hypothalamus in Male Mice. *Endocrinology* 2016, Epub ahead of print. (*Authors contributed equally to the work)

Reis WL, Biancardi VC, Zhou Y, **STERN JE**. A Functional Coupling between Carbon Monoxide and Nitric Oxide Contributes to Increased Vasopressin Neuronal Activity in Heart Failure rats. *Endocrinology*, 175 (5), 2052-66, 2016.

Biancardi VC, Stranahan AM, Krause EG, de Kloet AD, **STERN JE**. Crosstalk between AT1 receptors and Toll like receptor 4 in microglia mediate Angiotensin II-derived ROS production in the Hypothalamic Paraventricular nucleus. *American Journal of Physiology Heart and Circulatory Physiology*, 310 (3) H404-15, 2016.

Biancardi VC and **STERN JE**. Compromised blood-brain barrier permeability: Novel mechanism by which circulating angiotensin II signals sympathoexcitatory centers during hypertension. *Journal of Physiology*, 594 (6): 1591-600, 2016.

Marins FR, Limborco-Filho M, Xavier CH, Biancardi VC, Vaz GC, **STERN JE**, Oppenheimer SM, Fontes MA Functional topography of cardiovascular regulation along the rostrocaudal axis of the rat posterior insular cortex. *Clin Exp Pharmacol Physiol*, 43 (4): 484-93, 2016.

Sladek CD, Michelini LC, Stachenfeld NS, **STERN JE**, Urban JH. Endocrine-Autonomic Linkages. *Comp. Physiol*. 5(3): 1281-323, 2015.

Ferreira-Neto HC, Antunes VR, **STERN JE** ATP stimulates rat hypothalamic sympathetic neurons by enhancing AMPA receptor-mediated currents. *Journal of Neurophysiology*, 114 (1): 159-169, 2015.

Kim KJ, Iddings, J, **STERN JE**, Blanco, B, Croom, D Kirov, S and Filosa JA Astrocyte contributions to flow/pressure-evoked parenchymal arteriole vasoconstriction. *Journal of Neuroscience*, 35 (21): 8245-57, 2015.

Du W, **STERN JE**, Filosa JA Neuronal-derived nitric oxide and somatodendritically released vasopressin regulate neurovascular coupling in the rat hypothalamic supraoptic nucleus . *Journal of Neuroscience*, 35 (13): 5330-41, 2015.

Wagner L. Reis, Chun-Xia Yi, Yuanqing Gao, Mathias H. Tschöp and **STERN JE** Brain innate immunity regulates hypothalamic arcuate neuronal activity and feeding behavior. *Endocrinology*, 156 (4): 1303-15, 2015.

Reis WL, Biancardi VC, Son S, Antunes-Rodrigues J, **STERN JE**. Carbon monoxide and nitric oxide interactions in magnocellular neurosecretory neurones during water deprivation. *Journal of Neuroendocrinology*, 27 (2): 111-22, 2015.

Naskar, K and **STERN JE**. A functional coupling between extrasynaptic NMDA receptors and A-type K⁺ channels under astrocyte control regulates hypothalamic neuronal activity. *Journal of Physiology*, 592 (13) 2813-27, 2014.

Biancardi VC, Son SJ, Ahmadi S, Filosa JA, **STERN JE** Circulating Angiotensin II gains access to the hypothalamus and brain stem during hypertension via breakdown of the blood brain barrier. *Hypertension*, 63 (3): 572-9, 2014. *Selected as a Faculty 1000 Prime article.*

Cassaglia PA, ShiZ, Li B, Reis WL, Clute-Reining NM, **STERN JE**, Brooks VL. Neuropeptide Y acts in the paraventricular nucleus to suppress sympathetic nerve activity and its baroreflex regulation. *J. Physiology* 592 (7) 1655-75, 2014.

Gao Y, Ottaway N, Schriever SC, Legutko B, Garcia-Caceres C, de la Fuente E, Mergen C, Bour S, Thaler JP, Seeley RJ, Filosa J, **STERN JE**, Perez-Tilve D, Schwarts MW, Tschop MH, Yi CX. Hormones and diet, but not body weight control hypothalamic microglia activity. *Glia*, 62 (1), 17-25, 2014.

Son S, Filosa JA, Potapenko ES, Biancardi VC, Zheng H, Patel KP, Tobin VA, Ludwig M and **STERN JE** Dendritic Peptidergic Release Mediates Inter-Population Crosstalk in the Hypothalamus. *Neuron* 78 (6): 1036-49, 2013. *Selected as a Faculty 1000 Prime article.*

STERN JE and Potapenko ES Enhanced NMDA receptor-mediated intracellular calcium signaling in magnocellular neurosecretory neurons in heart failure rats. *American Journal of Physiology* 305 (4): R414-22, 2013.

Potapenko ES, Biancardi VC, Zhou Y, **STERN JE**. Astrocytes Modulate a Postsynaptic NMDA-GABAA Receptor Crosstalk in Hypothalamic Neurosecretory Neurons. *Journal of Neuroscience*, 33 (2): 631-640, 2013.

STERN JE, Filosa JA. Bidirectional neuro-glial signaling modalities in the hypothalamus: role in neurohumoral regulation. *Auton Neurosci.* Apr;175(1-2):51-60, 2013.

Chun-Xia Y, Gericke M, Kruger M, Alkemade A, Kabra DG, Hanske S, Filosa J, Pfluger P, Bingham N, Woods, SC, Herman J, Kasbeek A, Baumann M, Lang R, **STERN JE**, Bechmann I, Tschop MH. High Calorie diet triggers hypothalamic Angiopathy. *Molecular Metabolism*, 1, 95-100, 2012

Potapenko ES, Biancardi VC, Zhou Y, **STERN JE**. Altered Astrocyte Glutamate Transporter Regulation in Hypothalamic Neurosecretory Neurons in Heart Failure Rats. *American Journal of Physiology* 03(3): R291-300 2012. PMID: 22696576.

Reis WL, Biancardi VC, Son S, Antunes-Rodrigues J and **STERN JE**. Enhanced Expression of Heme-Oxygenase-1 and Carbon Monoxide Excitatory Effects in Oxytocin and Vasopressin Neurons during Water Deprivation. *Journal of Neuroendocrinology*, Apr;24(4):653-63, 2012. PMID: 22060896

STERN JE, Sonner PM, Son S, Silva FCP, Jackson K and Michelini LC. Exercise-training Normalizes an Increased Neuronal Excitability of NTS-projecting neurons of the Hypothalamis Paraventricular Nucleus in Hypertensive rats. *J Neurophysiol.* May;107(10):2912-21, 2012.

Prakash R, Somanath PR, El-Remessy AB, Kelly-Cobbs A, **STERN JE**, Dore-Duffy P, Johnson M, Fagan SC, Ergul A. Enhanced cerebral but not peripheral angiogenesis in the goto-kakizaki model of type 2 diabetes involves VEGF and peroxynitrite signaling. *Diabetes.* Jun;61(6):1533-42. Epub 2012 Mar 8, 2012.

Filosa J, Naskar K, Perfume G, Iddings J, Biancardi V, Vatta M, **STERN JE**. Endothelin-Mediated Calcium Responses in Supraoptic Nucleus Astrocytes Influence Magnocellular Neurosecretory Firing Activity. *J Neuroendocrinol.* 24 (2): 378-92, 2012

Biancardi VC, Son SJ, Sonner PM, Zheng H, Patel KP, **STERN JE**. Contribution of central nervous system endothelial nitric oxide synthase to neurohumoral activation in heart failure rats. *Hypertension.* Sep;58(3):454-63, 2011.

Potapenko ES, Biancardi VC, Florschütz RM, Ryu PD, **STERN JE**. Inhibitory-excitatory synaptic balance is shifted toward increased excitation in magnocellular neurosecretory cells of heart failure rats. *J Neurophysiol.* Sep;106(3):1545-57, 2011.

Fleming TM, Scott V, Naskar K, Joe N, Brown CH, **STERN JE**. State-dependent changes in astrocyte regulation of extrasynaptic NMDA receptor signalling in neurosecretory neurons. *J Physiol.* Aug 15;589(Pt 16):3929-41, 2011.

Jo JY, Jeong JA, Pandit S, **STERN JE**, Lee SK, Ryu PD, Lee SY, Han SK, Cho CH, Kim HW, Jeon BH, Park JB. Neurosteroid modulation of benzodiazepine-sensitive GABA_A tonic inhibition in supraoptic magnocellular neurons. *Am J Physiol Regul Integr Comp Physiol.* Jun;300(6):R1578-87, 2011.

Sonner PM, Lee S, Ryu PD, Lee SY, **STERN JE**. Imbalanced K⁺ And Ca²⁺ Subthreshold Interactions Contribute To Increased Hypothalamic Presympathetic Neuronal Excitability In Hypertensive Rats. *J Physiol.* Feb 1;589(Pt 3):667-83, 2011.

Yi CX, Habegger KM, Chowen JA, **STERN JE**, Tschöp MH. A role for astrocytes in the central control of metabolism. *Neuroendocrinology*.;93(3):143-9. 2011,

Han, TH, Lee, K, Park, JB, Park, JH, Kim, DY, **STERN JE**, Lee, SY, Ryu PD "Reduction in synaptic GABA release contributes to target-selective elevation of PVN neuronal activity in rats with myocardial infarction" *Am. J. Physiol Reg Integ Comp Physiol*, 299 (1), R129-39, 2010

Cruz, J, Bonagamba, GH, **STERN JE**, Machado, BH "FOS Expression in the NTS in Response to Peripheral Chemoreflex Activation in Awake Rats" *Autonomic Neuroscience*, 15 (152): 27-34 2010.

Biancardi, VC, Campos, RR and **STERN JE** "Altered balance of GABAergic and glutamatergic afferent inputs in PVN-RVLM neurons of renovascular hypertensive rats", *J Comp Neurol*, 518 (5): 567-585, 2010.

Park, JB, Jo JY, Zheng, H, Patel, KP and **STERN JE** "Regulation of tonic GABA inhibitory function, presympathetic neuronal activity and sympathetic outflow from the paraventricular nucleus by astroglial GABA transporters ", *J. Physiology*, 587 (19): 4645-60, 2009.

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Tauchi M, Zhang R, D'Alessio DA, **STERN JE**, Herman JP. "Distribution of glucagon-like peptide-1 immunoreactivity in the hypothalamic paraventricular and supraoptic nuclei". *J Chem Neuroanat*, 36 (3-4): 144-9, 2008.

Powers-Martin K, Phillips JK, Biancardi VC, **STERN JE**. "Heterogeneous Distribution of Basal Cyclic Guanosine Monophosphate (cGMP) within Distinct Neuronal Populations in the Hypothalamic Paraventricular Nucleus". *American Journal of Physiology*, 295 (4): R1341-50, 2008.

Lee S, Han TH, Sonner PM, **STERN JE**, Ryu PD, Lee SY. "Molecular characterization of T-type Ca(2+) channels responsible for low threshold spikes in hypothalamic paraventricular nucleus neurons". *Neuroscience*. 154 (4): 1195-203, 2008.

Blanco VM, **STERN JE**, Filosa JA "Tone-dependent vascular responses to astrocyte-derived signals". *American Journal of Physiology Heart Circ Physiol*. 294(6):H2855-63, 2008.

Sonner PM, Filosa JA, **STERN JE** "Diminished A-type potassium current and altered firing properties in presympathetic PVN neurones in renovascular hypertensive rats". *Journal of Physiology*, 586(6): 1605-22, 2008.

Sonner, PM and **STERN JE**. "Functional role of A-type potassium currents in rat presympathetic PVN neurones". *Journal of Physiology*, 582(Pt 3): 1219-1238, 2007.

Park JB, Skalska S, Son S, and **STERN JE**. "Dual GABAA receptor-mediated inhibition in rat presympathetic paraventricular nucleus neurons". *Journal of Physiology*, 582(Pt 2): 539-551, 2007.

Higa K, Silva F, Michelini, L and **STERN JE** "Exercise training-induced remodeling of (nor)adrenergic innervation in the PVN: Differential effects in normotensive and hypertensive rats". *American Journal of Physiology*, 292 (4): R1717-27, 2007.

Park, J, Skalska, S and **STERN JE**: "Characterization of a novel tonic GABAA receptor-mediated inhibition in magnocellular neurosecretory neurons and its modulation by glia. *Endocrinology*, 147 (8): 3746-60, 2006.

Li, YF, Rabeler, B, Jackson, K, **STERN JE** and Patel KP "Interaction between glutamate and GABA systems in the integration of sympathetic outflow by the paraventricular nucleus of the hypothalamus". *American Journal of Physiology*, 291 (6): H2847-56, 2006..

Martins AS, Crescenzi, A, **STERN JE**, Bordin S, Michelini L "Hypertension and exercise training affect differentially oxytocin and oxytocin receptor expression in the brain". *Hypertension*, 46 (4): 1004-1009, 2005.

Perez-Tilve, D, **STERN JE**, Tschop, M "The brain and the metabolic syndrome: not a wireless connection" *Endocrinology*, 147 (3): 1136-9, 2006.

Jackson K, Viera Silva HM, Zhang W, Michelini, LC, **STERN JE** "Exercise training differentially affects intrinsic excitability of autonomic and neuroendocrine neurons in the hypothalamic paraventricular nucleus". *J Neurophysiology*, 94 (5): 3211-20, 2005.

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STERN JE and Zhang, W "Cellular sources, targets and actions of constitutive nitric oxide in the magnocellular neurosecretory system of the rat. *J Physiol*, 562(3); 725-744 2005.

Brown CH, **STERN JE** Jackson LM, Bull PM, Leng, G and Russell, J "Morphine withdrawal increases intrinsic excitability of oxytocin neurons in morphine-dependent rats. *European J Neuroscience*, 21(20); 501-512 2005.

Li, Y and **STERN JE**. Activation of postsynaptic GABAB receptors modulate the firing activity of supraoptic oxytocin and vasopressin neurons: role of calcium channels. *J Neuroendocrinol*, 16(2): 119-130, 2004.

Li, Y, Zhang, W and **STERN JE**. Nitric oxide inhibits the firing activity of preautonomic neurons in the paraventricular nucleus of the hypothalamus: role of GABA. *Neuroscience*, 118(3):585-601, 2003.

STERN JE and Zhang, W "Preautonomic Neurons in the Paraventricular Nucleus of the Hypothalamus Contain Estrogen Receptor beta". *Brain Research*, 975(1-2):99-109, 2003.

STERN JE Li Y and Zhang W. Nitric oxide: A local signaling molecule controlling the activity of preautonomic neurons in the paraventricular nucleus of the hypothalamus. *Acta Physiologica Scandinava*, 177.1: 37-42, 2003

STERN JE Electrophysiological and Morphological Properties of Preautonomic Neurons in the rat Hypothalamic Paraventricular Nucleus. *Journal of Physiology*, 537.1: 161-177, 2001.

STERN JE and Ludwig, M. Nitric oxide inhibits supraoptic oxytocin and vasopressin neurons via activation of GABAergic synaptic inputs. *American Journal of Physiology* , 280: R1815-1822, 2001.

STERN JE; Hestrin S and Armstrong, WE Enhanced neurotransmitter release at glutamatergic synapses on oxytocin neurons during lactation in the rat. *Journal of Physiology*, 526.1 109-114 (2000)

STERN JE; Galarreta, G; Foehring, RC; Hestrin, S; Armstrong, WE. Differences in the properties of ionotropic glutamate synaptic currents in oxytocin and vasopressin neuroendocrine neurons. *Journal of Neuroscience*, 19(9): 3367-3375 (1999)

STERN JE; Armstrong, WE Reorganization of the dendritic arborization of oxytocin and vasopressin neurons of the rat supraoptic nucleus during lactation. *Journal of Neuroscience*, 18 (3): 841-853 (1998).

Armstrong, WE; **STERN JE** Electrophysiological and Morphological characteristics of neurons in the perinuclear zone of the supraoptic nucleus. *Journal of Neurophysiology*, 78: 2427-2437 (1997).

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STERN JE; Esquifino, AI; Bonacho, G; Cardinali, DP. The influence of cervical sympathetic neurons on parathyroid hormone and calcitonin release in the rat. Independence of pineal mediation. *Journal of Pineal Research*, 22 (1): 9-15 (1997).

STERN JE; Armstrong, WE Changes in the electrical properties of supraoptic nucleus oxytocin and vasopressin neurons during lactation. *Journal of Neuroscience*, 16 (16): 4861-4871 (1996).

STERN JE, Guinjoan SM, Cardinali DP Correlation between serum and urinary calcium levels and psychopathology in patients with affective disorders. Short communication. *J Neural Transm*, 103(4):509-13 (1996)

STERN JE Armstrong, WE Electrophysiological differences between oxytocin and vasopressin neurones recorded from female rats in vitro. *Journal of physiology* 488.3: 701-708 (1995).

STERN JE; Cardinali, DP Effect of parathyroid hormone and calcitonin on cholinergic markers in rat parathyroid gland. *Journal of Neuroendocrinology* , 7(9): 689-693 (1995).

Esquifino, AI; Arce, A; **STERN JE**; Cardinali, DP Effect of stress and cyclosporine on ornithine decarboxylase activity in rat submaxillary lymph nodes. *European Journal of Pharmacology* 285 (2) : 143-149 (1995).

Esquifino, AI; Rosenstein, RE; **STERN JE**; Cardinali, DP Cyclosporine effect on ornithine decarboxylase activity in rat submaxillary lymph nodes: Modulation by parasympathetic nerves. *European Journal of Pharmacology*, 254 (1-2): 1-7 (1994).

Rossano, GL; **STERN JE**; Justo, SN; Szwarcfarb, B; Moguilevsky, JA; Cardinali, DP. Peripheral autonomic regulation of gonadotropin secretion in pubertal rats. Inhibition of post-castration rise of gonadotropins during wallerian degeneration after sympathetic superior cervical ganglionectomy. *The Journal of Neural Transmission, gen section*, 96: 41-50 (1994).

STERN JE, Cardinali, DP Effect of parathyroid hormone and calcitonin on acetylcholine release in rat sympathetic superior cervical ganglion. *Brain Research*, 650: 267-274 (1994).

STERN JE Keller Sarmiento, MI; Cardinali, DP. Parasympathetic control of parathyroid hormone and calcitonin secretion in rats *The Journal of the Autonomic Nervous System*, 48: 45-53 (1994).

STERN JE; Ladizesky, MG; Keller Sarmiento, MI; Cardinali, DP Effect of sympathetic superior cervical ganglion ablation on parathyroid hormone and calcium levels in rat. *Neuroendocrinology Letters*, 15(3): 221-226 (1993).

STERN JE; Ladizesky, MG; Keller Sarmiento, MI; Cardinali, DP Involvement of the cervical sympathetic nervous system in the changes of calcium homeostasis during turpentine oil-induced stress. *Neuroendocrinology*, 57: 381-387 (1993).

Esquifino, AI; Rosenstein, RE; **STERN JE**; Cardinali, DP Cyclosporine effect on ornithine decarboxylase activity in rat submaxillary lymph nodes: Modulation by sympathetic nerves. *European Journal of Pharmacology* 197(2-3): 161-165. (1991).

Murer, MG; Riquelme, L; **STERN JE**; Pazo, JH Role of the mesopontine areas and superior colliculum in the circling behavior induced by apomorphine in rats bearing unilateral lesion of the entopeduncular nucleus. *Behavioural Brain Research* 45(1): 37-44 (1991).

Chuluyan, HE; Rosenstein, RE; **STERN JE**; Cardinali, DP. Regional differences in norepinephrine and dopamine concentration and effect on serotonin uptake and release in bovine pineal gland. *Journal of Pineal Research* 8:255-268 (1990).

PUBLICATIONS (Review Articles)

Ludwig M, **STERN J**. Multiplicity of action modalities of dendritically-released oxytocin and vasopressin. *Phil. Trans. R. Soc. B.* 370 (1672), 2015.

STERN JE Neuroendocrine-Autonomic integration in the PVN: Novel roles for dendritically released neuropeptides. *Journal of Neuroendocrinology*, 27 (6): 487-97, 2015.

Brown CH, Bains J, Ludwig M, **STERN JE**. Physiological regulation of magnocellular neurosecretory cell activity: Integration of intrinsic, local and afferent mechanisms. *Journal of Neuroendocrinology*, 25 (8): 678-710, 2013.

STERN JE, Filosa JA. Bidirectional neuro-glia signaling modalities in the hypothalamus: Role in Neurohumoral Regulation. *Auton Neurosci*, 175 (1-1) 51-60, 2013.

Tasker JG, Oliet SHR, Bains JS, Brown CH and **STERN JE**, Glial Regulation of Neuronal Function: From Synapse to System Physiology. *Journal of Neuroendocrinology*, 24 (4) 566-76, 2012.

Michelini, LC & **STERN JE**, "Neuronal Plasticity in Central Autonomic Networks Role in Cardiovascular Control during Exercise" *Experimental Physiology*, 94 (9): 947-960 (2009).

STERN JE, "Nitric oxide and homeostatic control: an intercellular signalling molecule contributing to autonomic and neuroendocrine integration?" *Progress in Biophysics and Molecular Biology*, 84: 197-215, 2004.

STERN JE and Cardinali, DP "Influence of the autonomic nervous system on calcium homeostasis in the rat". *Biological Signals*, 3: 15-25 (1994).

Cardinali, DP and **STERN JE**, "Peripheral neuroendocrinology of the cervical autonomic nervous system". *Brazilian Journal of Medical and Biological Research*, 27 (3): 573-599 (1994).

PUBLICATIONS (Book Chapters)

Sladek, CD; Michelini LC, Stachenfeld NS; **STERN JE**, Urban JH "Endocrine-Autonomic Linkages: Neuroendocrine-Autonomic Interactions" *Comprehensive Physiology*, 2015, *In press*.

STERN JE "Role of Central Vasopressin in the Generation of Multimodal Homeostatic Responses" *Neurophysiology of Neuroendocrine Neurons*, Wiley, 2014.

STERN JE "Autonomic and Neuroendocrine roles of the Paraventricular Nucleus" *Central Regulation of Autonomic Functions*, 2nd Edition, Oxford University Press, 2011.

STERN JE Cell variability and plasticity in the electrophysiological properties of autonomic-related neurons of the hypothalamic paraventricular nucleus. *Neural Mechanisms of Cardiovascular Regulation*, Kluwer Academic Publishers, 147-161, 2004.

STERN JE Li Y and Richards DS Postsynaptic GABAB receptors in supraoptic oxytocin and vasopressin neurons. *Progress in Brain Research*, 139: 121-125 , 2002

Armstrong, WE, **STERN JE** and Teruyama, R. Plasticity in the Electrophysiological Properties of Oxytocin neurons. *Microscopy Research and Technique*, 56(2): 73-80 2002

Armstrong, WE, and **STERN JE**. Phenotypic and state-dependent expression of the electrical properties of oxytocin and vasopressin neurones. *Progress in Brain Research*, Vol 119 : 97-109 1998

Armstrong, WE. and **STERN JE**. Electrophysiological distinctions between oxytocin and vasopressin neurons in the supraoptic nucleus. *Advances in Experimental Biology and Medicine*, Vol 449: 67-77 1998

Cardinali, DP, Esquifino, AI, Rossano, GL, **STERN JE**, Moguilevsky, JA Peripheral autonomic regulation of gonadotropin secretion in pubertal rats. *Puberty, Basic and Clinical Aspects 1994*

PUBLICATIONS (Abstracts Presented at Scientific Meetings, 2000-present)

Meng Zheng and Javier E. Stern Enhanced A-type K⁺ current inhibition by extrasynaptic NMDA receptors contributes to increased hypothalamic neuronal activity in hypertensive rats. **FASEB summer conference on Neural Mechanisms in Cardiovascular Regulation 2016.**

Maria S Pitra and Javier E. Stern. NMDA efficiently evokes dendritic release of neuropeptides: a quantitative real time assessment. **Winter Conference on Brain Research 2016.**

Javier E. Stern, Kaushik Patel, Neru Sharma, Hong Zheng, Vinicia Biancardi, Sookjin Son, Extrasynaptic NMDA receptor signaling under astrocyte control contributes to central neuropeptide regulation of hypothalamic neuronal activity and sympathetic control. **Winter Conference on Brain Research 2016.**

Vinicia Campana Biancardi and Javier E Stern Microglial TLR4 mediate angiotensin II-induced reactive oxygen species production within the paraventricular nucleus in hypertension. **Council on Hypertension meeting 2015**

Maria S Pitra and Javier E. Stern. Prorenin Stimulates Firing Activity in Hypothalamic Neurons via Angiotensin II-Dependent and -Independent Mechanisms. **Council on Hypertension meeting 2015**

Krishna Naskar and Javier E. Stern. Activity-dependent neuroglial remodeling enhances extrasynaptic glutamate signaling and optimizes adaptive neuronal responses to a physiological challenge. **European Meeting on Glial Cells in Health and Disease 2015**

Maria S Pitra, Yumei Feng, Javier E. Stern. Interaction of prorenin with the (pro)renin receptor leads to a calcium-dependent increase in firing activity of magnocellular hypothalamic neurons . **International Congress of Neuroendocrinology 2014**

Vinicia Campana Biancardi and Javier E Stern Angiotensin II stimulates reactive oxygen species production in PVN microglial cells via TLR4 receptor activation. **Experimental Biology Meeting 2014.**

Wagner L. Reis, Vinicia C. Biancardi, Yiqiang Zhou, Javier E. Stern Carbon monoxide excitatory effect in vasopressin neurons of heart failure rats involves nitric oxide/GABA signaling. **Experimental Biology Meeting 2014.**

Evgeniy Potapenko, Stern E. Javier Mitochondria influence NMDA-induced calcium dynamics in hypothalamic magnocellular neurosecretory cells. **Experimental Biology Meeting 2014.**

Hildebrando Candido Ferreira Neto, Vagner R. Antunes, Javier E. Stern Hyperosmotic stimulation elicits a purinergic-glutamatergic coupling in PVN presympathetic neurons. **Experimental Biology Meeting 2014.**

Vinicia Campana Biancardi and Javier E Stern - Angiotensin II contributes to microglial cell activation in the PVN of hypertensive rats **Experimental Biology Meeting 2013.**

Krishna Naskar and Javier E. Stern - Astrocytes influence SON and PVN neurosecretory and presympathetic neuronal excitability via activation of an extrasynaptic NMDA/A-type K⁺ channel coupling mechanism **Experimental Biology Meeting 2013.**

Wenting Du, Ki Jung Kim, Javier E Stern, and Jessica Andrea Filosa - Monitoring neurovascular coupling in the hypothalamic supraoptic nucleus in an in vitro slice preparation **Experimental Biology Meeting 2012.**

Krishna Naskar and Javier E. Stern - Astrocytes influence neurosecretory and presympathetic hypothalamic neurons via activation of extrasynaptic NMDARs negatively coupled to A-type K⁺ channels **Experimental Biology Meeting 2012.**

Sook Jin Son, Jessica A. Filosa, Hong Zheng, Kaushik P. Patel, and Javier E. Stern - Dendritic release of VP mediates crosstalk between neuroendocrine and presympathetic PVN neurons: Role in osmotically-driven homeostatic responses FASEB J March 29, 2012 26:1091.30

Vinicia Campana Biancardi, Evgeniy S Potapenko, and Javier E Stern - Altered expression and function of the astrocyte glutamate transporter GLT1 in the hypothalamus of heart failure rats **Experimental Biology Meeting 2012.**

Evgeniy Potapenko, Vinicia C. Biancardi, Renea M. Florschütz and Javier E. Stern Postsynaptic Crosstalk between Excitatory (NMDA) and Inhibitory (GABAA) Receptors in Neurosecretory Neurons of the Hypothalamic Supraoptic Nucleus (SON). **World Congress on Neurohypophyseal Hormones (WCNH) 2011. Received a Poster Award.**

Wagner L. Reis, Vinicia C. Biancardi, Sook J. Son, Jose Antunes-Rodrigues, Javier E. Stern. Water Deprivation increases the Expression of Heme Oxygenase (HO) and Carbon Monoxide (CO) Actions in Hypothalamic Oxytocin (OT) and Vasopressin (VP) Neurons. **World Congress on Neurohypophyseal Hormones (WCNH) 2011.**

Sook Jin Son and Javier E. Stern. Activity-Dependent Release of Vasopressin within the PVN mediates Cross-Talk between Neuroendocrine and Sympathetic-Related PVN Neurons. **World Congress on Neurohypophyseal Hormones (WCNH) 2011.**

Krishna Naskar, Javier E. Stern. Astrocytes Influence a Functional Coupling between Extrasynaptic NMDA Receptors and Voltage-Gated K⁺ Channel in SON Neurons. **Congress on Neurohypophyseal Hormones (WCNH) 2011.**

V.C. Biancardi, S.J. Son, P.M. Sonner, H. Zheng, K. P. Patel, and J. E. Stern. Contribution of Central Nervous System eNOS to Neurohumoral Activation in Heart Failure Rats. **Congress on Neurohypophyseal Hormones (WCNH) 2011.**

Natalie Joe, Victoria Scott, Tiffany M. Fleming, Javier E. Stern, and Colin H. Brown. Glial Modulation of Supraoptic Nucleus Neuron Activity via Regulation of Ambient Neurotransmitter Levels during Dehydration. **Congress on Neurohypophyseal Hormones (WCNH) 2011.**

Roshini Prakash, Safia Ogbi, Javier E Stern, Azza El-Remessy, Susan Fagan, Adviye Ergul. Diabetes Stimulates Brain Angiogenesis: *In Vitro* and *In Vivo* Evidence. **International Stroke Conference 2011.**

Vinicia Campana Biancardi, Sook Jin Son, Javier E. Stern. Differential and region-specific contribution of high blood pressure and AngII AT1 receptors to altered blood-brain barrier integrity in chronic hypertension. **Experimental Biology Meeting 2011.**

Sook Jin Son, Javier E Stern ATP-sensitive K⁺ channels mediate glucose sensing in preautonomic hypothalamic neurons. Altered mechanisms in diabetic rats. **Experimental Biology Meeting 2011.**

Krishna Naskar¹, Javier E. Stern. Extrasynaptic NMDA receptors under astrocytic control modulate K⁺ channel function in magnocellular neurosecretory neurons. **Experimental Biology Meeting 2011.**

Stern, JE, Son, S Filosa SA. Activity-Dependent Release of Vasopressin within the Hypothalamic PVN Mediates Cross-Talk between Neuroendocrine and Sympathetic PVN neurons. International Congress of Neuroendocrinology, **Rouen FR, 2010**

Son SJ, Ahmadi S, Filosa JA and Stern JE, "Altered Blood Brain Barrier Integrity in Hypertensive Rats: Role of Angiotensin II", **Experimental Biology Meeting 2010**

Biancardi, V, Son, SJ, Stern JE "Altered expression of carbon monoxide in the paraventricular nucleus of the hypothalamus in coronary ligation model of heart failure rats", **Experimental Biology Meeting 2010.**

Potapenko E, Biancardi V, Stern JE "Altered excitatory/inhibitory synaptic balance in supraoptic (SON) and paraventricular (PVN) neurosecretory neurons in heart failure rats". **Experimental Biology Meeting 2010.**

Son, SJ, Stern JE "Endogenous vasopressin levels within the PVN stimulate preautonomic PVN neuronal activity" **Society for Neuroscience Meeting, 2009.**

Reis, W, Biancardi V, Antunes-Rodrigues J, Stern JE, "Cellular distribution of heme-oxygenase (HO), a carbon monoxide (CO)-producing enzyme, in the hypothalamic supraoptic (SON) and paraventricular (PVN) nuclei". **Experimental Biology meeting 2009.**

Biancardi, V, Campos, RR, Stern JE "Altered balance of GABAergic and glutamatergic inputs in PVN-RVLM neurons of renovascular hypertensive rats". **Experimental Biology Meeting 2009.**

Fleming, TM, Stern JE "Ambient glutamate levels under astrocytic regulation enhance excitability of supraoptic nucleus (SON) neurons. An in vivo and in vitro study" **Experimental Biology Meeting 2009.**

Sook Jin Son and Javier E Stern "Locally released vasopressin increases presympathetic PVN neuronal activity". **Experimental Biology 2009.**

Javier E. Stern, Jessica A Filosa, Patrick M Sonner "Altered balance of subthreshold K⁺ and Ca²⁺ channels contributes to enhanced excitability of preautonomic PVN neurons in hypertensive rats". **20st International Symposium on the Autonomic Nervous System, 2009**

Cruz, JC, Bonagamba LGH, Machado, BH, Biancardi VC and Stern, JE "Intermittent chemoreflex

activation induces FOS expression in sympathetic related neurons of the hypothalamic paraventricular nucleus (PVN)", **Society for Neuroscience Meeting, 2008.**

Yoon, J, Kang, G Son, S, Stern, JE, Park JB "Dual modulation of allopregnanolone on phasic and tonic GABAA currents in supraoptic nucleus (SON) neurons. **Society for Neuroscience Meeting, 2008.**

Sookjin Son and Javier E. Stern. Locally released vasopressin increases presympathetic PVN neuronal activity. **Experimental Biology Meeting 2008.**

Vinicia C. Biancardi, Patrick M. Sonner, Javier E. Stern. eNOS contributes to altered nitric oxide availability and neuronal activity in the PVN during Heart Failure. **Experimental Biology Meeting 2008.**

Tiffany M. Fleming, Javier E. Stern. Ambient glutamate levels under astrocytic regulation tonically activate NMDA receptors and enhance excitability of supraoptic nucleus (SON) neurons. **Society for Neuroscience Meeting, 2007.**

Patrick M Sonner, Jessica A Filosa, Javier E Stern Intracellular Ca²⁺ dynamics in presympathetic PVN neurons during repetitive firing, **Experimental Biology Meeting 2007.**

Vinicia Biancardi, Patrick M Sonner and Javier E Stern. Cellular distribution of eNOS within the hypothalamic SON and PVN: Contribution to NO availability and modulatory actions on neuronal activity. **Experimental Biology Meeting 2006.**

C.M. Heesch, J.E. Stern, S.M. Burcks, Y. Ueta, and D. Murphy Laser capture microscopy (LCM) and real time RT-PCR: Evaluation of gene expression in PVN of transgenic vasopressin-enhanced green fluorescent protein rats. **Experimental Biology Meeting 2006**

Patrick M Sonner, Javier E Stern Functional interactions between subthreshold A-type K⁺ (IA) and T-type Ca²⁺ currents (IT) in RVLM-projecting PVN neurons in normotensive and hypertensive rats. **Society for Neuroscience Meeting, 2006**

Jin Bong Park, Sook Jin Son, Silvia Skalska, Javier E. Stern Further characterization of GABA_A receptor-mediated tonic inhibition in supraoptic nucleus (SON) neuroendocrine neurons **Society for Neuroscience Meeting, 2006**

Skalska, S, Stern JE Diminished GABAergic synaptic function in paraventricular (PVN) and supraoptic (SON) neurons in diabetic rats. **Experimental Biology Meeting 2006.**

Sonner, PM, Stern JE Altered A-type potassium currents (IA) in RVLM-projecting PVN neurons during hypertension. **Experimental Biology Meeting 2006.**

Powers-Martin K, Phillips, JK, Zhang, W Stern JE. Constitutive Nitric oxide signal transduction pathways in association with preautonomic neuronal subpopulations in the hypothalamic PVN. **Experimental Biology Meeting 2006.**

Park JB, Stern JE Novel GABAA receptor-mediated tonic inhibition in preautonomic and magnocellular neuroendocrine neurons in hypothalamic paraventricular (PVN) and supraoptic (SON) nuclei. **Society for Neuroscience Meeting 2005.**

Skalska, S; Morris, M; Stern, JE Cellular osmosensitivity of magnocellular neurosecretory neurons in mice lacking angiotensin AT1a receptors **Experimental Biology Meeting 2005.**

Sonner, PM; Stern, JE Role of A-type potassium currents on the excitability and firing activity of RVLM-projecting PVN neurons **Experimental Biology Meeting 2005.**

Jackson-Kinney, K; Phillips, JK; Stern, JE Reorganization of the catecholaminergic innervation of Paraventricular Nuclear neurons that project to the NTS during renovascular hypertension **Experimental Biology Meeting 2005.**

Biancardi, VC; de Campos, RR; Stern JE Increased Density of GABAergic nerve terminals in the Hypothalamic Paraventricular Nucleus of Renovascular Hypertensive Rats **Experimental Biology Meeting 2005.**

Park, JB; Stern, J; A tonic inhibitory postsynaptic current mediated by GABAA receptors restrains firing activity in preautonomic and magnocellular neuroendocrine neurons **Experimental Biology Meeting 2005.**

Jackson K, Roxley, R, Phillips J, Stern JE Differential expression of NMDA receptor subtypes in the PVN during the development of Hypertension. **Australian Neuroscience Meeting, 2005.**

Cruz, J C; Bonagamba, L G; **Stern, JE**; Machado, BH c-FOS expression in NTS and PVN neurons in response to chemoreflex activation in awake rats **Experimental Biology Meeting 2004.**

Jackson, K; Silva, H M; Coleman, A; Michelini, L C; Stern, J E Plastic changes in the cellular properties of preautonomic neurons of the hypothalamic paraventricular nucleus (PVN) during exercise training **Experimental Biology Meeting 2004.**

Sonner, P; Zhang, W; **Stern, J E.** Cellular morphology and electrophysiology of GAD1-GFP-expressing hypothalamic GABAergic neurons. **Experimental Biology Meeting 2004.**

Sonner, P; Morri, M and Stern, JE. Changes in the cellular properties of medial amygdaloid neurons in the oxytocin knockout mouse, an animal model of social behavior disorders. **Society for Neuroscience Meeting, 2003.**

Li, Y and Stern, JE. Direct imaging of nitric oxide production in oxytocin and vasopressin neurons of the hypothalamic supraoptic nucleus. **Society for Neuroscience Meeting, New Orleans LA, 2003.**

Jackson KL and Stern JE. Functional Characterization of Glutamate Synaptic Activity in Preautonomic Neurons of the Paraventricular Nucleus (PVN) of the Hypothalamus. **Experimental Biology Meeting, 2003.**

Li, Y and Stern JE. Real time imaging of nitric oxide production in hypothalamic magnocellular neurons of the supraoptic nucleus (SON). **Experimental Biology Meeting 2003.**

D.S. Richards; Y. Li; R.M. Villalba; F.J.Alvarez;and J.E. Stern Expression and function of postsynaptic Gabab receptors in oxytocin and vasopressin magnocellular neurons. **Society for Neuroscience Meeting, 2002.**

Stern, JE, Li, Y and Sonner, PA Nitric oxide inhibits the firing activity of preautonomic neurons in the paraventricular nucleus of the hypothalamus (PVN) **Society for Neuroscience Meeting, 2002.**

Haley, E and Stern, JE Dendritic plasticity in preautonomic neurons of the paraventricular nucleus (PVN) of the hypothalamus contributes to altered excitability during hypertension. **Experimental Biology Meeting 2002**

Stern, JE, Li Y and Sonner P Nitric oxide modulates firing activity of preautonomic neurons in the paraventricular nucleus (PVN) of the hypothalamus. **Experimental Biology Meeting 2002**

Zhang W and Stern JE Preautonomic neurons in the paraventricular nucleus(PVN) of the hypothalamus express estrogen receptor-B immunoreactivity. **Experimental Biology Meeting 2002**

Richards DS, Villalba R, Alvarez, F and Stern JE Characterization of GABAB receptor subunits expression in magnocellular neuroendocrine neurons. **Experimental Biology Meeting 2002**

Stern, JE and Li Y Postsynaptic GABAB receptors modulate firing activity of magnocellular supraoptic neurons. **Experimental Biology Meeting 2002**

Stern, JE Neuronal excitability of preautonomic neurons in the paraventricular nucleus of the hypothalamus: role of intrinsic and extrinsic factors. **XXXIV International Congress of Physiological Sciences. Christchurch, New Zealand 2001.**

Stern, JE Neuronal excitability of preautonomic neurons in the paraventricular nucleus of the hypothalamus is dependent upon their innervation target. **Central Mechanisms of Cardiovascular Control: Cellular Molecular and Integrative Aspects. Sydney, Australia 2001.**

Stern, JE Plastic changes in GABAergic activity and GABA-A receptor/channel function in the hypothalamic paraventricular nucleus of spontaneously hypertensive rats (SHR). **Experimental Biology Meeting 2001.**

Stern, JE and Ludwig, M Nitric oxide inhibits supraoptic vasopressin neurons via activation of GABAergic synaptic inputs. A novel mechanism for cardiovascular control. **Experimental Biology Meeting 2001.**

Stern, JE Cellular properties of cardiovascular related neurons in the hypothalamic paraventricular nucleus. **Experimental Biology Meeting 2001.**

Richards D, Villalba RM, Alvarez FJ and Stern JE GABA-B receptor subunit expression in magnocellular neuroendocrine neurons. An immunohistochemical study. **Experimental Biology Meeting 2001.**

Stern, JE Preautonomic parvocellular neurons in the hypothalamic paraventricular nucleus: An electrophysiological and morphological study. **Society for Neuroscience Meeting, 2000.**

Stern JE and Ludwig M Nitric Oxide Modulation of Supraoptic Oxytocin and Vasopressin Neurons Involves Potentiation of GABAergic Synaptic Inputs". **54th Annual Fall Conference and Scientific Sessions, Council for High Blood Pressure Research AHA 2000.**

Ludwig, M and Stern JE Nitric Oxide Inhibits Rat Supraoptic Oxytocin and Vasopressin Neurones via Activation of GABAergic Synapses". **International Congress of Endocrinology, Sidney, Australia 2000.**

Stern, JE Electrophysiological properties of cardiovascular-related neurons in the hypothalamic paraventricular nucleus. Modulatory actions of norepinephrine. **Baroreceptor and Cardiopulmonary Receptor Reflexes. American Physiological Society Conference. 2000.**

INVITED TALKS (Last 6 Years)

2008

"Intra- and inter-cellular mechanisms controlling neuronal activity in central presympathetic neurons"
Department of Physiology Dartmouth University NH

"Intra- and inter-cellular mechanisms controlling neuronal activity in central presympathetic neurons"
Department of Physiology, University of Sao Paulo, Sao Paulo Brazil.

"Decoding intrinsic and cell-cell communication mechanisms regulating neuronal activity in CNS preautonomic neurons".

Department of Anatomy and Neurobiology, University of Tennessee

"Role of the hypothalamus in blood pressure control: Elucidating intrinsic and extrinsic cellular mechanisms"
19th Annual Vascular Biology and Hypertension Symposium, Birmingham AL

"Inter-network Communication Modalities in the PVN: Role in Neurohumoral Integration"
Neuroscience Retreat, Medical College of Georgia.

2009

"Decoding Cell-Cell Communication Modalities Regulating Neuronal Activity in the PVN: Role in Neurohumoral integration".

Department of Physiology, University of Nebraska Medical Center

"Novel Insights into Intrinsic and Intercellular Mechanisms Underlying Neurohumoral Integration by the PVN".
In Bristol Symposium 2009: The hypothalamic paraventricular nucleus in health and disease, Bristol UK

"Novel Insights into Intrinsic and Intercellular Mechanisms Underlying Neurohumoral Integration by the PVN",
Department of Physiology, Federal University of Minas Gerais, Belo Horizonte, Brazil.

"Exercise-induced Plasticity in the Central Nervous System".

XXXIV Annual Meeting of the Federation of Societies of Experimental Biology (FeSBE), Sao Paulo, Brazil

"Peptidergic signaling mechanisms within the hypothalamic PVN: Role in neurohumoral integration in health and disease states"

XXXIV Annual Meeting of the Federation of Societies of Experimental Biology (FeSBE), Sao Paulo, Brazil

"Novel insights into inter-cellular mechanisms underlying neurohumoral integration by the PVN in health and disease conditions",

Department of Integrative Physiology, University of North Texas Health Science Center, Fort Worth

2010

"Neurohumoral Integration in the Hypothalamus: Busy traffic in the extracellular space"

Department of Physiology, Medical College of Georgia

"Excitatory/Inhibitory Balance in Neurosecretory Neurons: Role of Astroglial Cells",

Experimental Biology Meeting, Anaheim CA, 2010 (speaker at the Symposium "Novel mechanisms regulating neuronal activity: insights from the hypothalamus")

"Unconventional signaling mechanisms underlying hypothalamic regulation of fluid balance homeostasis".

Annual Congress of the Argentinean Physiological Society.

2011

"Excitatory/inhibitory balance in neurosecretory neurons. Role of astroglial cells".

World Congress on Neurohypophyseal Hormones, Boston MA.

"Neuro-glial-vascular signaling mechanisms influencing neurohumoral integration in the brain". International Society of Autonomic Neuroscience, Buzios Brazil.

2012

"Dendritic peptidergic release mediated interpopulation crosstalk in the hypothalamus"

Department of Neuroscience, University of New Mexico.

"Novel signalling mechanisms involved in neuroendocrine/autonomic integration by the brain" Experimental Biology 2012, Symposium "Functional Integration In The Hypothalamic Paraventricular Nucleus"

"DendriticPeptidergic release mediates interpopulation crosstalk between neurosecretory and preautonomic neurons: Role in Fluid balance homeostasis"

Department of Physiology, School of Medicine, Ribeirao Preto, Brasil

"Dendritic peptidergic release mediates inter-population crosstalk between neurosecretory and preautonomic hypothalamic networks"

Seminar speaker, Department of Physiology and Functional Genomics, University of Florida, Gainesville.

"Interpopulation crosstalk via dendritic peptidergic release contributes to the generation of hypothalamic homeostatic responses"

Neurophysiology of Neurosecretory Neurons: Workshop. Tulane University, October 2012.

2013

"Dendritic release of peptides: Novel inter-population communication modality"

Seminar speaker, Neuroscience Program, Medical College of Georgia

"Dendritic peptide release mediates inter-population crosstalk between neurosecretory and preautonomic networks"

World Congress on Neurohypophysial Hormones, Bristol UK

"Novel signaling mechanisms underlying the hypothalamic control of cardiovascular and renal function"
Annual Congress of the Argentinean Physiological Society, Buenos Aires, Argentina

"Novel mechanisms underlying neuroendocrine and autonomic integration in the hypothalamus"
Institute for Diabetes and Obesity, Helmholtz Zentrum, Munich Germany

"Dendritic peptide release mediates neuronal inter-population crosstalk in the Hypothalamus"
Department of Physiology, Emory University Atlanta GA

"Dendritic peptide release mediates neuronal inter-population crosstalk in the Hypothalamus"
Department of Integrative Biology and Physiology, University of Minnesota MN

2014

"Dendritic peptide release mediates inter-population crosstalk in the Hypothalamus"
Winter Conference on Brain Research, Steamboat CO.

"Novel mechanisms contributing to hypothalamic regulation of cardiovascular function in health and disease condition"
Department of Biomedical Sciences, Colorado State University

"Dendritic peptide release mediates inter-population crosstalk in the Hypothalamus"
16th International Congress of Endocrinology, Chicago IL

"Dendritic peptide release mediates inter-population crosstalk in the Hypothalamus"
8th International Congress of Neuroendocrinology, Sydney Australia

"Novel Neuro-glial mechanisms mediating Angiotensin II actions in the Brain"
1st PanAmerican Congress of Physiological Sciences, Iguacu Falls, Brazil

"Novel insights into mechanisms underlying enhanced glutamate excitatory actions within the hypothalamus during heart failure"
Symposium: Recent Advances in the Study of the Integrative Physiology with Emphasis on the Neuroendocrine Control of Energy Metabolism and Body Fluid Homeostasis, Department of Physiology, University of Sao Paulo, Ribeirao Preto Brazil

"Dendritic peptide release mediates inter-population crosstalk in the Hypothalamus"
Australian School of Advanced Medicine
Macquarie University, Sydney, Australia

"Dendritic peptide release mediates inter-population crosstalk in the Hypothalamus"
Department of Neurobiology
University of Alabama, Birmingham AL

"Dendritic release of neuropeptides: A novel form of inter population communication in the hypothalamus"
Department of Biology, Georgia State University, Atlanta GA

"Dendritic release of neuropeptides: A novel form of inter population communication in the hypothalamus"

Department of Biomedical Sciences, Universidad Catolica Argentina (UCA), Buenos Aires, Argentina

2015

“Unraveling Novel Mechanisms Underlying Neurohumoral Activation in Cardiovascular Diseases”
Department of Physiology and Functional Genomics, University of Florida, Gainesville FL.

“Neuronal Dendrites: Sources of Communication Signals in the Central Nervous System”
Department of Physiology, School of medicine, University of Buenos Aires, Argentina

“Unraveling Novel Mechanisms Contributing to Neurohumoral Activation in Cardiovascular Diseases”
Department of Pharmacology and Center for Hypertension, University of Iowa, Iowa City IA.

“What is responsible for the elevated hypothalamic drive to sympathetic neurons in cardiovascular diseases”
International Society of Autonomic Neuroscience Meeting, Stresa Italy.

“Non-conventional modalities of neurotransmission in the hypothalamus: Where the tortoise and the hare meet”
Ferreya Institute-CONICET-University of Cordoba, Argentina

2016

“Novel insights into central mechanistic targets mediating AngII actions in the brain”
Angiotensin Gordon Conference, Tuscany Italy

“Non-conventional modalities of neurotransmission in the hypothalamus: Where the tortoise and the hare meet”
Department of Physiology, University of Texas, Health Science Center San Antonio

“Mechanisms underlying contribution of PVN astrocytes to sympathoexcitation by Angiotensin II”
Summer FASEB Conference on Neural Mechanisms in Cardiovascular Regulation, Saxtons River, VT

“Effects of the renin-angiotensin system on neuro-glial communications: Implications for neuroinflammation, cardiovascular disease and cognition”
Center for Neurodegenerative Disorders, Emory University

“Synaptic and non-synaptic mechanisms regulate autonomic-neuroendocrine integration in the hypothalamus”
Plenary Lecture Speaker at the New Zealand Medical Sciences Congress 2016, Queenstown, NZ

“Non-conventional modalities of neurotransmission in the hypothalamus: Where the tortoise meets the hare”
2nd Federation of Latin American and Caribbean Neuroscience Societies (FALAN) meeting, Buenos Aires, Argentina 2016.

“Multiple functional roles mediated by dendritic release of neuropeptides in the hypothalamus”
Distinguished Lectures Series, Neuroscience Institute, Georgia State University, Atlanta GA 2016.

TEACHING EXPERIENCE

1- Georgia State University (2017 – Present)

NEUR8790 Topics in Neuroscience: “Gut-brain axis in health and disease (Course Director)

2- Other Institutions

Medical College of Georgia (2008-2017)

MEDI 5135 Cellular and Systems Processes
SGSS8060 Intro to Research II
PSIO9010 Seminar in Physiology
SGSS8033 Integrative systems biology
SGSS8022 Molecular Cell biology
PSIO 8350 Current Trends in Physiology: Neuro-glial communication (*Course Director*)
MEDI5166 Nervous system and special senses
SGS8120 Cardiovascular Physiology and Pharmacology
NURO8082 Neuroscience II: Anatomical/Functional Organization of the Autonomic Nervous System
NURO8082 Neuroscience II: Central regulation of the cardiovascular system.

University of Cincinnati, Neuroscience Graduate Program (2001-2007)

Course: “System-Behavioral Neuroscience” Course Director

Course: “Neuroendocrine regulatory systems”

Course: “Neuroendocrinology of Homeostasis”

Course: “Neuroscience Journal Club” 2005

Wright State University, School of Medicine (1999-2001)

Course: “Molecular, Cellular, and Tissue Biology”.

Course: "Pathobiology and Therapeutics" 2001-2004

Course: "Medical Neuroscience" 2001-2004

Course: "Physiology: Endocrinology Section" 2003

Course: "Neuropharmacology" 2001-2004

Course: Principles of Biodynamics 2001-2004

Course: Research Techniques 2001-2004

Course: Topics in Pharmacology 2003-2004

Program: STREAMS (short-term Research Experience for Minority Students)

University of Tennessee, Memphis School of Medicine (1995)

Course "Neuroscience: Extra- and Intracellular Measurements "

Course "Neuroanatomy " 1995

University of Buenos Aires, School of Medicine (1991-1994)

Course: “Human Physiology “

TRAINEES (Postdoctoral Fellows, Graduate & Undergraduate Students)

POSTDOCTORAL FELLOWS

- Yingjun Li, MD, Dept. of Pharm/Tox., Wright State University, 2001-2004
- Wenfeng Zhang, MD Dept. of Pharm/Tox., Wright State University, 2001-2005
- Silvia Skalska, Dept of Psychiatry, University of Cincinnati, 2004-2006
- Jinbong Park, Ph.D., Dept of Psychiatry, University of Cincinnati, 2004-2006
- Ji Yoon, Dept. Physiology, Medical College of Georgia, 2008-2009
- Vinicia Biancardi, Dept of Psychiatry, University of Cincinnati, 2005-present
- Sook Jin, Dept of Psychiatry, University of Cincinnati, 2006-2013
- Evgeniy Potapenko, Dept. Physiology, Medical College of Georgia, 2008-2015
- Wagner Reis, Dept. Physiology, Medical College of Georgia, 2010-2015
- Meng Zheng, Dept. Physiology, Medical College of Georgia, 2012-present
- Hildebrando Ferreira Neto, Physiology, Medical College of Georgia, 2015-present

GRADUATE STUDENTS

- Soledad Pitra, Universidad Nacional Cordoba, Argentina, 2013-Present
- Krishna Naskar, Medical College of Georgia graduate program, 2008-2014
- Hildebrando Neto, University of Sao Paulo, Brazil, 2012-2014
- Vinicia Biancardi, Dept. Physiology, Federal University of Sao Paulo, 2003-2005 (Co-mentor).
- Patrick Sonner,, Dept. of Pharm/Tox, Wright State University, 2002-2007
- Kimberly Krawczewski, Neuroscience Program, University of Cincinnati, 2007
- Tiffany Fleming,, Neuroscience Program, University of Cincinnati, 2007-2008
- Wagner Reis, Dept. Physiology, University of Sao Paulo, 2008-2010
- Dannette Richards, BS, Dept. of Pharm/Tox. Wright State University, 1999-2001
- Keshia Jackson, BS, Dept. of Pharm/Tox., Wright State University, 1999-2004

UNDERGRADUATE STUDENTS

- Keshia Jackson, Wright State University, 1999-2000 (*recently accepted in the MS program of the Department of Pharmacology and Toxicology*)
- Kimberley Noble: Wright State University, 1999-2000
- Targ Elgumati, Wright State University, 2000
- Arnold Coleman, Wright State University, 2001-2004
- Hazel Gonder, Wright State University, 2002
- Kamesh Rajagopalan, Wright State University, 2003
- Jaisim Varadarajan, Wright State University, 2003
- Fabiana Silva, University of Cincinnati, 2005
- Rosvita Todd, Georgia Health Sciences University, 2011

SUMMER RESEARCH STUDENTS

- Earl Haley, The Ohio State University, 2001 (*recently accepted as a student in the School of Medicine at WSU.*)
- Hamid Turay, Southern Illinois University, 2002
- Tanisha Daugherty, Tennessee State University, 2003
- Domonique Smith, Arizona State University, 2004
- Sahra Ahmadi, Medical College of Georgia, STARS program 2009

THESIS COMMITTEE MEMBER

- Bhavna Desai, Department of Physiology, Medical College of Georgia, 2012-present
- Wenting Du, Department of Physiology, Medical College of Georgia, 2011-present
- Elizabeth Leeman, Dept. Anatomy, Wright State University, 2000-2006
- Jing Zhang, Dept. Physiology, Wright State University, 2000-2006
- Eric Geiman, Dept. Anatomy, Wright State University, 2000-2006
- Andrea Hoffman, Dept. Pharmacology and Toxicology, Wright State University, 2002-2006.
- Robert Puryear, Dept. Pharmacology and Toxicology, Wright State University, 2001-2002
- Atira Hardiman, Dept Pharmacology and Toxicology, Wright State University, 2002-2006

ACTIVE COLLABORATORS (National and international)

National

Dr. Kaushik Patel	University of Nebraska Medical Center, Omaha NE
Dr. Yumei Feng	Colorado State University, Fort Collins, CO
Dr. Virginia Brooks	Oregon Health & Science University, Portland OR
Dr. Adviye Ergul	Augusta University, Augusta GA
Dr. Jessica Filosa	Augusta University, Augusta GA
Dr. Eric Krause	University of Florida, Gainesville

International

Dr. Mathias Tschop	Helmholtz Centre for Health and Environment, Munich Germany.
Dr. Mike Ludwig	University of Edinburgh, Scotland UK.
Dr. Colin Brown	University of Otago, Dunedin New Zealand
Dr. Jacqueline Phillips	Australian School of Advanced Medicine, Sydney, Australia
Dr. Pandong Ryu	Seoul National University, Seoul South Korea
Dr. Antunes-Rodrigues	University of Sao Paulo, Ribeirao Preto, Brazil
Dr. Lisete Micheline	University of Sao Paulo, Sao Paulo, Brazil
Dr. Vagner Antunes	University of Sao Paulo, Sao Paulo, Brazil
Dr. Marcelo Vatta	University of Buenos Aires, Buenos Aires Argentina