

Curriculum Vitae

EDUARDO CANDELARIO-JALIL, Ph.D.

Associate Professor (Tenured)
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EDUCATION

Year Conferred	Degree	Field of study	Institute and Location
1997	Bachelor of Science (B.Sc.) (Pharmaceutical Sciences)	Pharmacology	University of Havana, Cuba
1999	Master of Science (M.Sc.) (Experimental Pharmacology)	Neuropharmacology	University of Havana, Cuba
1997-2002	Graduate Student	Pharmacology	University of Havana, Cuba
2002	Ph.D. (Pharmaceutical Sciences)	Neuropharmacology	University of Havana, Cuba
12/03-02/06	Postdoctoral Fellow Mentor: Dr. Bernd L. Fiebich	Molecular Neurobiology	Neurochemistry Research Lab, University of Freiburg Medical School, Freiburg, Germany
03/06-09/08	Postdoctoral Fellow Mentor: Dr. Gary A. Rosenberg	Neurology/ Neuroscience	Department of Neurology, University of New Mexico, Health Sciences Center, Albuquerque, NM

POSITIONS AND EMPLOYMENT

- 2008-2011 Research Assistant Professor, Department of Neurology, University of New Mexico Health Sciences Center, Albuquerque, NM
- 2011-06/2019 Assistant Professor (Tenure-track), Department of Neuroscience, University of Florida College of Medicine, Gainesville, FL, USA
- 2019-present Associate Professor (Tenured), Department of Neuroscience, University of Florida College of Medicine, Gainesville, FL, USA

AWARDS AND HONORS

- 1997 Gold Diploma for high academic standing, granted by the Chairman of the University of Havana, Cuba
- 1997 Award for best B.Sc. thesis presentation, University of Havana, Cuba
- 2002 Award for the best Ph.D. work in Natural Sciences (National competition), Havana, Cuba
- 2003 Award for the best scientific publication in Biological Sciences (National competition), Havana, Cuba
- 2003-2005 Post-doctoral Fellowship, granted by the Alexander von Humboldt Foundation, Bonn, Germany
- 2007-2009 Post-doctoral Fellowship from the American Heart Association
- 2011 Member of the Program Committee of the American Society for

- Neurochemistry Meeting, Saint Louis
- 2011 Jordi Folch-Pi Memorial Award from the American Society for Neurochemistry
- 2013 Program Committee of the International Society for Neurochemistry Meeting, Cancun
- 2013 Excellence Award for Assistant Professors, Office of the Provost, University of Florida
- 2013-2018 Exemplary Teacher Award, College of Medicine, University of Florida (awarded each year from 2013-2018)
- 2014 Maren Award, University of Florida
- 2017 University of Florida Term Professorship Award (From the Provost office in recognition of outstanding academic and research achievements).
- 2020-2023 Member of the Scientific Program Committee of the International Stroke Conference (ISC).

RESEARCH FUNDING

Current Research Support

NIH/NINDS. R01NS103094 Candelario-Jalil (PI) 09/01/2017-05/31/2022
Neurovascular Protection by Adropin in Ischemic Stroke
 This project investigates the neuroprotective effects of adropin, a newly discovered endogenous peptide, in rodent models of ischemic stroke.
 Role: PI

NIH/NINDS. R01NS109816 Candelario-Jalil (PI) 07/01/2019-06/30/2024
Multi-pronged Approach to Recalibrating the Inflammatory Cascade in Ischemic Stroke with BET Blockade.
 The main aim of this project is to study the role of BET proteins in ischemic stroke pathophysiology in clinically relevant rodent models of cerebral ischemia.

Completed Research Support

NIH/NINDS. R01NS065849 Candelario-Jalil (PI) 05/01/11-12/31/17
Cyclooxygenase-2 Regulation of Blood-Brain Barrier Opening in Ischemic Stroke
 This project examines the role of COX-2 and EP receptors in blood-brain barrier disruption in ischemic stroke
 Role: PI

American Heart Association (AHA). Grant-in-Aid. Candelario-Jalil (PI) 07/01/2016-06/30/2018
Prostacyclin Receptor Activation and Neurovascular Protection in Ischemic Stroke
 This project examines the neuroprotective role of MRE-269, an agonist of the prostacyclin receptor, in aged rats of both sexes subjected to ischemic stroke.
 Role: PI

AHA-Preddoctoral Fellowship 07/01/14-06/30/16
 Graduate Student: Kimberly E. Hawkins
 Mentor: Dr. Eduardo Candelario-Jalil
 Lipoxin A4 neuroprotection in ischemic stroke

NIH/NINDS 04/01/2009 - 01/31/2011
 Principal Investigator - Dr. Eduardo Candelario-Jalil, Supplementee
 Supplement to promote Diversity in Health-related Research
 Supplement to Grant NS52305 (Dr. Gary A. Rosenberg)

Postdoctoral Fellowship 01/01/2007-12/31/2008
 Granted by the American Heart Association (AHA). Pacific Mountain Affiliate

Postdoctoral Fellowship 10/01/2003-02/28/2006
 Granted by the Alexander von Humboldt Foundation (Bonn, Germany)

GRANT REVIEWER

- NIH Brain Injury and Neurovascular Pathologies (BINP) Study Section; Permanent Member: Term July 2018 through June 2024.
- NIH Brain Injury and Neurovascular Pathologies (BINP) Study Section; Ad-hoc Reviewer: October 2015, February 2016, June 2016, September 2016, June 2017, June 2018.
- NIH - Scientific Review Group: ZRG1 MDCN-M 91 S, The Blood-Brain Barrier, Neurovascular System and CNS Therapeutics. Date(s) of review: November 07, 2017 and March 2018 (teleconference).
- NIH - Scientific Review Group: ZRG1 BDCN-K (02) M (Member Conflict: Neural Trauma and Stroke). Meeting date: February 28th, 2018.
- American Heart Association (Ad Hoc reviewer, four years of continued service, 2011-2015)
- American Heart Association (ad hoc reviewer, April 2017, January 2018, September 2018)

EDITORIAL DUTIES

Member of the Editorial Board of the following journals:

- *Journal of Cerebral Blood Flow and Metabolism*
- *Journal of Neuroinflammation*
- *Frontiers in Neurology – Stroke*

Associate Editor, *Journal of Neuroinflammation* (2010-2016).

JOURNAL REVIEWER (AD HOC)

Stroke	Journal of Cerebral Blood Flow and Metabolism	Journal of Neuroscience
Neurobiology of Disease	Brain Research	Neuroscience Letters
Brain, Behavior and Immunity	Journal of Neurochemistry	Journal of Neuroinflammation
Cellular and Molecular Life Sciences	Neurochemistry International	Neuroscience Research
European Journal of Neuroscience	Journal of Neuroscience Research	Pharmacological Research
European Journal of Pharmacology	Journal of Pharmacology & Experimental Therapeutics	Pharmacological Reviews
Experimental Neurology	Journal of the Neurological Sciences	Antioxidants & Redox Signaling
International Immunopharmacology	Journal of Cellular and Molecular Medicine	The FASEB Journal

PEER-REVIEWED PUBLICATIONS (69 original research articles; in reverse chronological order)

1. Rajagopal S, Yang C, DeMars KM, Poddar R, Candelario-Jalil E, Paul S. Regulation of post-ischemic inflammatory response: A novel function of the neuronal tyrosine phosphatase STEP. **Brain, Behavior, and Immunity** **2021** (*in press*).
2. Kusmartseva I, Wu W, Syed F, Van Der Heide V, Jorgensen M, Joseph P, Tang X, Candelario-Jalil E, Yang C, Nick H, Harbert JL, Posgai AL, Paulsen JD, Lloyd R, Cechin S, Pugliese A, Campbell-Thompson M, Vander Heide RS, Evans-Molina C, Homann D, Atkinson MA. Expression of SARS-CoV-2 Entry Factors in the Pancreas of Normal Organ Donors and Individuals with COVID-19. **Cell Metabolism** **2020**; 32(6):1041-1051.
3. Yang C, Yang Y, DeMars KM, Rosenberg GA, Candelario-Jalil E. Genetic Deletion or Pharmacological Inhibition of Cyclooxygenase-2 Reduces Blood-Brain Barrier Damage in Experimental Ischemic Stroke. **Frontiers in Neurology** **2020**;10.3389.
4. Bellozi PMQ, Gomes GF, da Silva MCM, de Asis Lima IV, Alvarez Batista CR, Carneiro Junior WO, Guimaraes Doria J, Vieira EL, Vieira RP, de Freitas RP, Ferreira CN, Candelario-Jalil E, Wyss-Coray T, Ribeiro FM, de Oliveira ACP. A positive allosteric modulator of mGluR5 promotes neuroprotective effects in mouse models of Alzheimer's disease. **Neuropharmacology** **2019**;160:107785.
5. DeMars KM, Yang C, Candelario-Jalil E. Neuroprotective effects of targeting BET proteins for degradation with dBET1 in aged mice subjected to ischemic stroke. **Neurochemistry International** **2019**; 127:94-102.
6. Yang C, DeMars KM, Candelario-Jalil E. Age-dependent decrease in adropin is associated with reduced levels of endothelial nitric oxide synthase and increased oxidative stress in the rat brain. **Aging and Disease** **2018**; 9(2):322-330.
7. DeMars KM, McCrea AO, Siwarski DM, Sanz BD, Yang C, Candelario-Jalil E. Protective effects of L-902,688, a prostanoid EP4 receptor agonist, against acute blood-brain barrier damage in experimental ischemic stroke. **Frontiers in Neuroscience** **2018**; 12:89.
8. DeMars KM, Yang C, Castro-Rivera CI Candelario-Jalil E. Selective degradation of BET proteins with dBET1, a proteolysis-targeting chimera, potentially reduces pro-inflammatory responses in lipopolysaccharide-activated microglia. **Biochemical and Biophysical Research Communications** **2018**; 497(1): 410-415.
9. Yang C, DeMars KM, Alexander JC, Febo M, Candelario-Jalil E. Sustained neurological recovery after stroke in aged rats treated with a novel prostacyclin analog. **Stroke** **2017**; 48(7): 1948-1956.
10. DeMars KM, Pacheco SC, Yang C, Siwarski DM, Candelario-Jalil E. Selective inhibition of Janus kinase 3 has no impact on infarct size or neurobehavioral outcomes in permanent ischemic stroke in mice. **Frontiers in Neurology** **2017**; 8:363.
11. Hawkins KE, DeMars KM, Alexander JC, de Leon LG, Pacheco SC, Graves C, Yang C, McCrea AO, Frankowski JC, Garrett TJ, Febo M, Candelario-Jalil E. Targeting resolution of neuroinflammation after ischemic stroke with a lipoxin A₄ analog: Protective mechanisms and long-term effects on neurological recovery. **Brain and Behavior** **2017**; 7:e00688.
12. DeMars KM, Yang C, Hawkins KE, McCrea AO, Siwarski DM, Candelario-Jalil E. Spatiotemporal changes in P-glycoprotein levels in brain and peripheral tissues following ischemic stroke in rats. **Journal of Experimental Neuroscience** **2017**; 11:1179069517701741.
13. Bennion DM, Isenberg JD, Harmel AT, DeMars KM, Dang AN, Jones CH, Pignataro ME, Graham JT, Steckelings UM, Alexander JC, Febo M, Krause EG, de Kloet A, Candelario-Jalil E, Sumners C.

Post-Stroke Angiotensin II Type 2 Receptor Activation Provides Long-Term Neuroprotection in Aged Rats. **PLoS One** 2017; 12(7)e0180738.

14. Saliba SW, Vieira ELM, de Melo Santos RP, Candelario-Jalil E, Fiebich BL, Vieira LB, Teixeira AL, de Oliveira AC. Neuroprotective effects of intrastriatal injection of rapamycin in a mouse model of excitotoxicity induced by quinolinic acid. **Journal of Neuroinflammation** 2017; 14:25.
15. Sharma RK, Candelario-Jalil E, Feineis D, Bringmann G, Fiebich BL, Akundi RS. 1-Trichloromethyl-1,2,3,4-tetrahydro-beta-carboline (TaClo) Alters Cell Cycle Progression in Human Neuroblastoma Cell Lines. **Neurotoxicity Research** 2017; 32(4):649-660.
16. Yang C, DeMars KM, Hawkins KE, Candelario-Jalil E. Adropin reduces paracellular permeability of rat brain endothelial cells exposed to ischemia-like conditions. **Peptides** 2016; 81:29-37.
17. Bellozi PM, Lima IV, Dória JG, Vieira ÉL, Campos AC, Candelario-Jalil E, Reis HJ, Teixeira AL, Ribeiro FM, de Oliveira AC. Neuroprotective effects of the anticancer drug NVP-BE235 (dactolisib) on amyloid- β 1-42 induced neurotoxicity and memory impairment. **Scientific Reports** 2016; 6:25226.
18. Frankowski JC, DeMars KM, Ahmad AS, Hawkins KE, Yang C, Leclerc JL, Doré S, Candelario-Jalil E. Detrimental role of the EP1 prostanoid receptor in blood-brain barrier damage following experimental ischemic stroke. **Scientific Reports** 2015; 5:17956.
19. Hawkins KE, Demars KM, Singh J, Yang C, Cho HS, Frankowski JC, Doré S, Candelario-Jalil E. Neurovascular protection by post-ischemic intravenous injections of the lipoxin A4 receptor agonist, BML-111, in a rat model of ischemic stroke. **Journal of Neurochemistry** 2014; 129(1):130-142.
20. Deb I, Manhas N, Poddar R, Rajagopal S, Allan AM, Lombroso PJ, Rosenberg, GA, Candelario-Jalil E, Paul S. Neuroprotective role of a brain-enriched tyrosine phosphatase, STEP, in focal cerebral ischemia. **Journal of Neuroscience** 2013; 33(45): 17814-17826.
21. Hawkins KE, DeMars KM, Yang C, Rosenberg GA, Candelario-Jalil E. Fluorometric immunocapture assay for the specific measurement of matrix metalloproteinase-9 activity in biological samples: application to brain and plasma from rats with ischemic stroke. **Molecular Brain** 2013; 6(1):14.
22. de Oliveira AC, Candelario-Jalil E, Langbein J, Wendeburg L, Bhatia HS, Schlachetzki JC, Biber K, Fiebich BL. Pharmacological inhibition of Akt and downstream pathways modulates the expression of COX-2 and mPGES-1 in activated microglia. **Journal of Neuroinflammation** 2012; 9(1):2
23. Candelario-Jalil E, Thompson JF, Taheri S, Grossetete M, Adair J, Edmonds E, Prestopnik J, Wills J, Rosenberg GA. Matrix Metalloproteinases are Associated with Increased Blood-Brain Barrier Opening in Vascular Cognitive Impairment. **Stroke** 2011; 42(5): 1345-1350.
24. Yang Y, Jalal FY, Thompson JF, Walker EJ, Candelario-Jalil E, Li L, Reichard RR, Ben C, Sang QX, Cunningham LA, Rosenberg GA. Tissue inhibitor of metalloproteinases-3 mediates the death of immature oligodendrocytes via TNF- α /TACE in focal cerebral ischemia in mice. **Journal of Neuroinflammation** 2011; 8(1):108.
25. Yang Y, Candelario-Jalil E, Thompson JF, Cuadrado E, Estrada EY, Rosell A, Montaner J, Rosenberg GA. Increased intranuclear matrix metalloproteinase activity in neurons interferes with oxidative DNA repair in focal cerebral ischemia. **Journal of Neurochemistry** 2010; 112(1): 134-149.
26. Aid S, Silva AC, Candelario-Jalil E, Choi SH, Rosenberg GA, Bosetti F. Cyclooxygenase-1 and -2 differentially modulate lipopolysaccharide-induced blood-brain barrier disruption through modulation of matrix metalloproteinase activity. **Journal of Cerebral Blood Flow and Metabolism** 2010; 30(2): 370-380.
27. Schlachetzki JC, Fiebich BL, Haake E, de Oliveira AC, Candelario-Jalil E, Heneka MT, Hull M. Norepinephrine enhances the LPS-induced expression of COX-2 and secretion of PGE2 in primary rat microglia. **Journal of Neuroinflammation** 2010; 7:2.

28. Taheri S, Candelario-Jalil E (**co-first author**), Estrada EY, Rosenberg GA. Spatiotemporal correlations between blood-brain barrier permeability and apparent diffusion coefficient in a rat model of ischemic stroke. **PLoS One** **2009**; 4(8):e6597.
29. Wendeburg L, de Oliveira AC, Bhatia HS, Candelario-Jalil E, Fiebich BL. Resveratrol inhibits prostaglandin formation in IL-1beta-stimulated SK-N-SH neuronal cells. **Journal of Neuroinflammation** **2009**; 6:26.
30. Sood RR, Yang Y, Taheri S, Candelario-Jalil E, Estrada EY, Walker EJ, Thompson J, Rosenberg GA. Increased Apparent Diffusion Coefficients on MRI linked with matrix metalloproteinases and edema in white matter after bilateral carotid artery occlusion in rats. **Journal of Cerebral Blood Flow and Metabolism** **2009**; 29(2):308-316.
31. Navarrete CM, Fiebich BL, de Vinuesa AG, Hess S, de Oliveira AC, Candelario-Jalil E, Caballero FJ, Calzado MA, Muñoz E. Opposite effects of anandamide and N-arachidonoyl dopamine in the regulation of prostaglandin E₂ and 8-iso-PGF_{2α} formation in primary glial cells. **Journal of Neurochemistry** **2009**; 109(2): 452-464.
32. Candelario-Jalil E, Muñoz E, Fiebich BL. Detrimental effects of tropisetron on permanent ischemic stroke in the rat. **BMC Neuroscience** **2008**; 9:19.
33. de Oliveira AC, Candelario-Jalil E, Bhatia HS, Lieb K, Hull M, Fiebich BL. Regulation of prostaglandin E₂ synthase expression in activated primary rat microglia: evidence for uncoupled regulation of mPGES-1 and COX-2. **Glia** **2008**; 56(8): 844-855.
34. Bhatia HS, Candelario-Jalil E (**co-first author**), de Oliveira C, Olajide OA, Martinez-Sanchez G, Fiebich BL. Mangiferin inhibits cyclooxygenase-2 expression and prostaglandin E₂ production in activated rat microglial cells. **Archives of Biochemistry and Biophysics** **2008**; 477(2):253-258.
35. Seidel MF, Fiebich BL, Ulrich-Merzenich G, Candelario-Jalil E, Koch FW, Vetter H. Serotonin mediates PGE₂ overexpression through 5-HT(2A) and 5-HT(3) receptor subtypes in serum-free tissue culture of macrophage-like synovial cells. **Rheumatology International** **2008**; 28(10):1017-1022.
36. Ajamieh HH, Candelario-Jalil E, Fernández OS, Gerbes AL. Ischaemic and pharmacological preconditionings protect liver via adenosine and redox status following hepatic ischaemia-reperfusion in rats. **Clinical Science (London)** **2008**; 115(2): 69-77.
37. Sood RR, Taheri S, Candelario-Jalil E, Estrada EY, Rosenberg GA. Early beneficial effect of matrix metalloproteinase inhibition on blood-brain barrier permeability as measured by magnetic resonance imaging countered by impaired long-term recovery after stroke in rat brain. **Journal of Cerebral Blood Flow and Metabolism** **2008**; 28(2): 431-438.
38. Candelario-Jalil E, Taheri S, Yang Y, Sood R, Grossetete M, Estrada EY, Fiebich BL, Rosenberg GA. Cyclooxygenase Inhibition Limits Blood-Brain Barrier Disruption following Intracerebral Injection of Tumor Necrosis Factor- α in the Rat. **Journal of Pharmacology and Experimental Therapeutics** **2007**; 323(2): 488-498.
39. Candelario-Jalil E, de Oliveira AC, Graf S, Bhatia HS, Hull M, Muñoz E, Fiebich BL. Resveratrol potently reduces prostaglandin E₂ production and free radical formation in lipopolysaccharide-activated primary rat microglia. **Journal of Neuroinflammation** **2007**; 4(1):25.
40. Candelario-Jalil E, González-Falcón A, García-Cabrera M, León OS, Fiebich BL. Post-ischemic treatment with the cyclooxygenase-2 inhibitor nimesulide reduces blood-brain barrier disruption and leukocyte infiltration following transient focal cerebral ischemia in rats. **Journal of Neurochemistry** **2007**; 100(4): 1108-1120.
41. Candelario-Jalil E, Akundi RS, Bhatia HS, Lieb K, Appel K, Muñoz E, Hull M, Fiebich BL. Ascorbic acid enhances the inhibitory effect of aspirin on neuronal cyclooxygenase-2-mediated prostaglandin E₂ production. **Journal of Neuroimmunology** **2006**; 174(1-2): 39-51.

42. Waschbisch A, Fiebich BL, Akundi RS, Schmitz ML, Hoozemans JJ, Candelario-Jalil E, Virtainen N, Veerhuis R, Slawik H, Yrjanheikki J, Hull M. Interleukin-1 beta-induced expression of the prostaglandin E-receptor subtype EP3 in U373 astrocytoma cells depends on protein kinase C and nuclear factor-kappaB. **Journal of Neurochemistry** 2006; 96(3): 680-693.
43. Fiebich BL, Candelario-Jalil E (*co-first author*), Mantovani M, Heinzmann M, Akundi RS, Hull M, Knorle R, Schnierle P, Finkenzeller G, Aicher B. Modulation of catecholamine release from rat striatal slices by the fixed combination of aspirin, paracetamol and caffeine. **Pharmacological Research** 2006; 53(4): 391-396.
44. Fiebich BL, Valente P, Ferrer-Montiel A, Candelario-Jalil E, Menthe J, Luecker P. Effects of coffees before and after special treatment procedure on cell membrane potentials in stomach cells. **Methods and Findings in Experimental and Clinical Pharmacology** 2006; 28(6): 369-372.
45. Candelario-Jalil E, Mhadu NH, González-Falcón A, García-Cabrera M, Muñoz E, León S, Fiebich BL. Effects of the cyclooxygenase-2 inhibitor nimesulide on cerebral infarction and neurological deficits induced by permanent middle cerebral artery occlusion in the rat. **Journal of Neuroinflammation** 2005; 2(1): 3.
46. Candelario-Jalil E, Slawik H, Ridelis I, Waschbisch A, Akundi RS, Hüll M, Fiebich BL. Regional distribution of the prostaglandin E2 receptor EP1 in the rat brain: accumulation in Purkinje cells of the cerebellum. **Journal of Molecular Neuroscience** 2005; 27(3): 303-10.
47. Akundi RS, Candelario-Jalil E, Hess S, Hüll M, Lieb K, Gebicke-Haerter PJ, Fiebich BL. Signal transduction pathways regulating cyclooxygenase-2 in lipopolysaccharide-activated primary rat microglia. **Glia** 2005; 51(3): 199-208.
48. Lieb K, Biersack L, Waschbisch A, Orlikowski S, Akundi RS, Candelario-Jalil E, Hüll M, Fiebich BL. Serotonin via 5-HT7 receptors activates p38 MAP kinase and protein kinase C epsilon resulting in interleukin-6 synthesis in human U373 MG astrocytoma cells. **Journal of Neurochemistry** 2005; 93(3): 549-559.
49. de la Vega L, Muñoz E, Calzado MA, Lieb K, Candelario-Jalil E, Gescheidmeir H, Färber L, Mueller W, Stratz T, Fiebich BL. The 5-HT3 receptor antagonist tropisetron inhibits T cell activation by targeting the calcineurin pathway. **Biochemical Pharmacology** 2005; 70(3): 369-380.
50. Martínez-Sánchez G, Al-Dalain SM, Menéndez S, Re L, Giuliani A, Candelario-Jalil E, Alvarez H, Fernández-Montequin JI, León OS. Therapeutic efficacy of ozone in patients with diabetic foot. **European Journal of Pharmacology** 2005; 523(1-3): 151-161.
51. Candelario-Jalil E, González-Falcón A, García-Cabrera M, León OS, Fiebich BL. Wide therapeutic time window for nimesulide neuroprotection in a model of transient focal cerebral ischemia in the rat. **Brain Research** 2004; 1007(1-2): 98-108.
52. Ajamieh HH, Menéndez S, Martínez-Sánchez G, Candelario-Jalil E, Re L, Giuliani A, León OS. Effects of ozone oxidative preconditioning on nitric oxide generation and cellular redox balance in a rat model of hepatic ischaemia-reperfusion. **Liver International** 2004; 24(1): 55-62.
53. Fiebich BL, Akundi RS, Seidel M, Geyer V, Haus U, Müller W, Stratz T, Candelario-Jalil E. Expression of 5-HT3A receptors in cells of the immune system. **Scandinavian Journal of Rheumatology** 2004; 33: 9-11.
54. Fiebich BL, Akundi RS, Lieb K, Candelario-Jalil E, Gmeiner D, Haus U, Müller W, Stratz T, Munoz E. Anti-inflammatory effects of 5-HT3 receptor antagonists in lipopolysaccharide-stimulated primary human monocytes. **Scandinavian Journal of Rheumatology** 2004; 33: 28-32.
55. Seidel MF, Ulrich-Merzenich G, Fiebich BL, Candelario-Jalil E, Koch FW, Vetter H. Tropisetron inhibits serotonin-induced PGE2 release from macrophage-like synovial cells in serum-free tissue culture. **Scandinavian Journal of Rheumatology** 2004; 33: 33.
56. Candelario-Jalil E, González-Falcón A, García-Cabrera M, Álvarez D, Al-Dalain S, Martínez G, León OS, Springer JE. Assessment of the relative contribution of COX-1 and COX-2 isoforms to

- ischemia-induced oxidative damage and neurodegeneration following transient global cerebral ischemia. **Journal of Neurochemistry** 2003; 86(3): 545-555.
57. Candelario-Jalil E, Alvarez D, Merino N, León OS. Delayed treatment with nimesulide reduces measures of oxidative stress following global ischemic brain injury in gerbils. **Neuroscience Research** 2003; 47(2): 245-253.
 58. Candelario-Jalil E, León OS. Effects of nimesulide on kainate-induced in vitro oxidative damage in rat brain homogenates. **BMC Pharmacology** 2003; 3(1): 7.
 59. González-Falcón A; Candelario-Jalil E (co-first author), García-Cabrera M, León OS. Effects of pyruvate administration on infarct volume and neurological deficits following permanent focal cerebral ischemia in rats. **Brain Research** 2003; 990(1-2): 1-7.
 60. Candelario-Jalil E, Álvarez D, García-Cabrera M, González-Falcón A, Martínez G, Merino N, Giuliani A, León OS. Neuroprotective efficacy of nimesulide against hippocampal neuronal damage following transient forebrain ischemia. **European Journal of Pharmacology** 2002; 453(2-3): 189-195.
 61. Candelario-Jalil E, Alvarez D, Castañeda JM, Al-Dalain SM, Martínez G, Merino N, León OS. The highly selective cyclooxygenase-2 inhibitor DFU is neuroprotective when given several hours after transient cerebral ischemia in gerbils. **Brain Research** 2002; 927(2): 212-215.
 62. Ajamieh H, Merino N, Candelario-Jalil E, Menéndez S, Martínez-Sánchez G, Re L, Giuliani A, León OS. Similar protective effect of ischaemic and ozone oxidative preconditionings in liver ischaemia/reperfusion injury. **Pharmacological Research** 2002; 45(4): 333-339.
 63. Candelario-Jalil E, Mhadu NH, Al-Dalain SM, Martínez G, León OS. Time course of oxidative damage in different brain regions following transient cerebral ischemia in gerbils. **Neuroscience Research** 2001; 41(3): 233-241.
 64. Candelario-Jalil E, Al-Dalain SM, Castillo R, Martínez G, León OS. Selective vulnerability to kainate-induced oxidative damage in different rat brain regions. **Journal of Applied Toxicology** 2001; 21(5): 403-407.
 65. Martínez G, Candelario-Jalil E, Giuliani A, León OS, Sam S, Delgado R, Núñez Sellés AJ. *Mangifera indica* L. extract (QF808) reduces ischaemia-induced neuronal loss and oxidative damage in the gerbil brain. **Free Radical Research** 2001; 35(5): 465-73.
 66. Candelario-Jalil E, Al-Dalain SM, León OS, Menéndez S, Pérez-Davison G, Merino N, Sam S, Ajamieh HH. Oxidative preconditioning affords protection against carbon tetrachloride-induced glycogen depletion and oxidative stress in rats. **Journal of Applied Toxicology** 2001; 21(4): 297-301.
 67. Al-Dalain SM, Martínez G, Candelario-Jalil E, Menéndez S, Re L, Giuliani A, León OS. Ozone treatment reduces markers of oxidative and endothelial damage in an experimental diabetes model in rats. **Pharmacological Research** 2001; 44(5): 391-396.
 68. Candelario-Jalil E, Ajamieh HH, Sam S, Martínez G, León OS. Nimesulide limits kainate-induced oxidative damage in the rat hippocampus. **European Journal of Pharmacology** 2000; 390(3): 295-298.
 69. Peralta C, León OS, Xaus C, Prats N, Candelario-Jalil E, Planell ES, Puig-Parellada P, Gelpí E, Roselló-Catafau J. Protective effect of ozone treatment on the injury associated with hepatic ischemia-reperfusion: antioxidant/prooxidant balance. **Free Radical Research** 1999; 31(3): 191-196.

Invited Review Articles and Book Chapters

1. Paul S, Candelario-Jalil E. Emerging neuroprotective strategies for the treatment of ischemic stroke: An overview of clinical and preclinical studies. **Experimental Neurology** **2021**; 335:113518.
2. Candelario-Jalil E, Paul S. Impact of aging and comorbidities on ischemic stroke outcomes in preclinical animal models: A translational perspective. **Experimental Neurology** **2021**; 335:113494.
3. Yang C, Hawkins KE, Doré S, Candelario-Jalil E. Neuroinflammatory Mechanisms of Blood-Brain Barrier Damage in Ischemic Stroke. **American Journal of Physiology Cell Physiology** **2019**; 316(2): C135-C153.
4. Batista CRA, Gomes GF, Candelario-Jalil E, Fiebich BL, de Oliveira ACP. Lipopolysaccharide-Induced Neuroinflammation as a Bridge to Understand Neurodegeneration. **International Journal of Molecular Sciences** **2019**; 20(9). pii: E2293.
5. Thaise da Silveira V, Candelario-Jalil E, de Oliveira ACP. Immunoneuropharmacology. Book Chapter. Teixeira AL and Bauer ME (Eds.). **Immunopsychiatry: A Clinician's Introduction to the Immune Basis of Mental Disorders**. Oxford University Press, 2019, pages 21-46. ISBN: 9780190884468.
6. Yang C, Candelario-Jalil E. Role of matrix Metalloproteinases in Brain Edema. Book Chapter. Badaut J and Plesnila N (Eds.). **Brain Edema: From Molecular Mechanisms to Clinical Practice** **2017**. Oxford: Academic Press, 2017, pages 199-216. ISBN: 978-0-12-803196-4. Elsevier Inc. 2017.
7. Candelario-Jalil E, Taheri S, Rosenberg GA. Brain edema in neurological diseases. Book Chapter. J.P. Blass (ed.), **Neurochemical Mechanisms in Disease** **2011**. Series "Advances in Neurobiology" Springer Science. ISBN: 978-1-4419-7103-6. Pages 125-168.
8. de Oliveira AC, Candelario-Jalil E, Fiebich BL, Santos Mda S, Palotás A, dos Reis HJ. Neuroinflammation and Neurodegeneration: Pinpointing Pathological and Pharmacological Targets. **Biomed Research International** **2015**:487241
9. Candelario-Jalil E, Yang Y, Rosenberg GA. Diverse roles of matrix metalloproteinases and tissue inhibitors of metalloproteinases in neuroinflammation and cerebral ischemia. **Neuroscience** **2009**; 158(3):983-994.
10. Candelario-Jalil E. Injury and Repair Mechanisms in Ischemic Stroke: Considerations for the Development of Novel Neurotherapeutics. **Current Opinion in Investigational Drugs** **2009**; 10(7):644-654.
11. Candelario-Jalil E. A role for cyclooxygenase-1 in beta-amyloid-induced neuroinflammation. **Aging (Albany NY)** **2009** Apr 13; 1(4): 350-353.
12. Candelario-Jalil E, Fiebich BL. Cyclooxygenase inhibition in ischemic brain injury. **Current Pharmaceutical Design** **2008**; 14(14): 1401-1418.
13. Candelario-Jalil E. Nimesulide as a promising neuroprotectant in brain ischemia: new experimental evidences. **Pharmacological Research** **2008**; 57(4): 266-273.
14. Candelario-Jalil E. Cyclooxygenase-2 regulation of brain lipid composition. **Future Lipidology** **2007** Aug; 2(4): 399-402.

RESEARCH INTERESTS

- Cerebral ischemic brain injury (global and focal cerebral ischemia). Neuropathological mechanisms of stroke
- Cyclooxygenases, prostaglandins, prostanoid receptors, neuroinflammation
- Blood-brain barrier damage in neurological disorders
- Neurodegeneration and neuroprotection studies in relevant animal models of brain damage
- Neuroregeneration and neurorestorative strategies for stroke

- Excitotoxicity, neuronal damage induced by oxidative stress, neuronal apoptosis
- Signal transduction pathways regulating the production of pro-inflammatory mediators (e.g., prostaglandin E₂, IL-1 β , TNF- α) after ischemic brain injury

TECHNICAL SKILLS

In vivo Studies

- Transient and permanent middle cerebral artery occlusion (focal cerebral ischemia) using the intraluminal filament method (rat and mouse).
- Transient global cerebral ischemia (gerbils).
- Rotarod test; assessment of neurological deficits in rats and mice following ischemic stroke.
- Locomotor activity in rodents.
- Dissection of several brain regions of the rodent brain.
- Intracardiac perfusion and brain processing for histological analysis, immunohistochemistry and in situ hybridization.
- Monitoring of physiological parameters in rodents.
- Blood sampling techniques.
- Administration of drugs by various routes (oral, intraperitoneal, intramuscular, intravenous and subcutaneous).
- Stereotaxic injections
- Induction of hepatic ischemia-reperfusion in the rat.
- Animal models to test anti-inflammatory and analgesic effects of different compounds and plant extracts (i.e., carrageenan-induced plantar edema assessed using the plethysmometer, hot plate test, acetic acid-induced writhing in mice, croton oil-induced ear edema in mice).

Cell culture

- Preparation of primary astrocytes and microglial cells (rat and mouse)
- Neuronal and glial cell lines (human SK-N-SH, SH-SY5Y, U373 MG cells and rat PC12 cells)
- Brain endothelial cells
- Human and rat monocytes and T-cells

Molecular Biology and Biochemical determinations

- Extraction and purification of RNA and DNA
- RT-PCR (qualitative and quantitative)
- Cloning of genes and sequence analysis
- Cellular Transfection
- Design of primers for PCR
- Restriction enzyme analysis
- Radioactive probe labeling
- Electrophoretic Mobility Shift Assay (EMSA)
- Enzyme activity (for several antioxidant enzymes and matrix metalloproteinases)
- Determination of different measures of oxidative stress in tissues, plasma and supernatants of cell cultures

Protein Analysis and Immunological Techniques

- SDS-PAGE electrophoresis
- Western blot
- Gelatin Zymography
- Immunohistochemistry; Immunocytochemistry; In situ Hybridization
- Immunoassays (EIA and ELISA)

Histology

- Brain processing for histological analysis
- Staining of brain sections (hematoxylin eosin, Nissl staining, Fluoro-Jade B staining).

- Immunohistochemistry and immunofluorescence

Other skills

- Image Analyzer Systems (measurement of infarct volumes and CA1 hippocampal neuronal cell counting)
- Word Processors; Data; Graphics; Pubmed
- Statistics (using different programs such as STATISTICA for Windows, Excel, and GraphPad)
- Skills obtaining brain sections using rotary microtomes and cryostats
- Microscopes (light and fluorescence)
- Radioisotopes counters
- CBF measurements in rodents (Laser-Doppler flowmetry).
- Bruker 4.7T MRI Magnet (FLASH Tripilot, T2-weighted, T1 maps, Diffusion weighted images)

ABSTRACTS (presented in scientific meetings)

1. Candelario-Jalil E. Neuroprotective Role of Adropin in Both Young and Aged Experimental Models of Ischemic Stroke. Invited talk at the **2018 International Stroke Conference**. Los Angeles, CA, USA. *Stroke Outcome in Animal Models with Comorbidities: Translational Impact of Novel Therapeutic Targets*. January 24, 2018.
2. DeMars KM, McCrea AO, Yang C, Candelario-Jalil E. Activation of the prostaglandin E2 receptor EP4 reduces blood-brain barrier damage in a rat model of ischemic stroke. **International Stroke Conference 2017**. Houston, TX. February 22-24, 2017. Abstract published in *Stroke* 2017; 48: ATP274.
3. Yang C, DeMars KM, Candelario-Jalil E. Adropin is profoundly neuroprotective in experimental ischemic stroke. **International Stroke Conference 2017**. Houston, TX. February 22-24, 2017. Abstract published in *Stroke* 2017; 48: ATP277.
4. Yang C, DeMars KM, Candelario-Jalil E. Neurovascular protection by adropin in ischemic stroke. **BRAIN 2017**. Berlin, Germany, April 1-4, 2017. Abstract published in *Journal of Cerebral Blood Flow and Metabolism*.
5. Hawkins KE, DeMars KM, McCrea AO, Pacheco S, de Leon L, Frankowski JC, Yang C, Candelario-Jalil E. Characterizing a dosing schedule for BML-111, a lipoxin A₄ receptor agonist, to maximally enhance resolution and neuroprotection in a rat model of ischemic stroke. **45th Annual Meeting of the Society for Neuroscience**. Chicago, IL, USA. October 17-21, 2015 (Poster presentation).
6. Yang C, Alexander JC, DeMars KM, Hawkins KE, Febo M, Candelario-Jalil E. Prostacyclin Receptor Activation With MRE-269 Reduces Infarct Size and Improves Long-term Neurological Recovery Following Ischemic Stroke in Both Young and Aged Rats. **International Stroke Conference 2015**. Nashville, Tennessee. February 11-13, 2015. Abstract published in *Stroke* 2015; 46: AWMP85.
7. Hawkins KE, Demars KM, Singh J, Yang C, Cho HS, Frankowski JC, Doré S, Candelario-Jalil E. Neurovascular protection by post-ischemic intravenous injections of the lipoxin A₄ receptor agonist, BML-111, in a rat model of ischemic stroke. **8th International Symposium on Neuroprotection and Neurorepair**. Magdeburg, Germany. April 9-12, 2014.
8. Hawkins KE, Demars KM, Singh J, Yang C, Cho HS, Frankowski JC, Doré S, Candelario-Jalil E. Neurovascular protection by post-ischemic intravenous injections of the lipoxin A₄ receptor agonist, BML-111, in a rat model of ischemic stroke. **International Stroke Conference 2014**. San Diego, CA, USA. February 12-14. (Poster presentation; Poster #PPS3).
9. Hawkins KE, Cho H, DeMars KM, Frankowski J, Candelario-Jalil E. Activation of the lipoxin A₄ receptor reduces infarct size and neuroinflammation in a rat model of ischemic stroke. **24th Biennial Joint Meeting, International Society for Neurochemistry-American Society for Neurochemistry**. Cancun, Mexico. April 20-24, 2013 (Poster presentation; Poster #PSM03-11).

10. Hawkins KE, Cho H, DeMars KM, Frankowski J, Candelario-Jalil E. Post-ischemic treatment with BML-111, a lipoxin A₄ receptor agonist, reduces infarct size and neuroinflammation in a rat model of ischemic stroke. **42nd Annual Meeting of the Society for Neuroscience**. New Orleans, LA, USA. October 13 -17, 2012 (Poster presentation).
11. Candelario-Jalil E. Blockade of prostaglandin E₂ EP1 receptor reduces blood-brain barrier disruption in ischemic stroke. **43rd Annual Meeting of the American Society for Neurochemistry**. Baltimore, MD, USA. March 3-7, 2012 (Invited Oral Presentation).
12. Candelario-Jalil E. Cyclooxygenase-2 regulation of blood-brain barrier disruption in ischemic stroke. **42nd Annual Meeting of the American Society for Neurochemistry**. Saint Louis, MO, USA. March 19-23, 2011 (Oral Presentation, S02-01).
13. Candelario-Jalil E, Yang Y, Taheri S, Bosetti F, Rosenberg GA. Cyclooxygenase-2 is associated with blood-brain barrier disruption in ischemic stroke through increased matrix metalloproteinase-9 production. **41st Annual Meeting of the American Society for Neurochemistry**. Santa Fe, NM, USA. March 6-10, 2010 (Poster PTW07-13).
14. Candelario-Jalil E, Yang Y, Taheri S, Bosetti F, Rosenberg GA. Genetic knockout or pharmacological inhibition of cyclooxygenase-2 block matrix metalloproteinase-9 expression and reduce blood-brain barrier disruption in ischemic stroke. **39th Annual Meeting of the Society for Neuroscience**. Chicago, IL, USA. October 17-21, 2009 (Oral presentation 117.3).
15. Candelario-Jalil E, Taheri S, Yang Y, Estrada EY, Sood R, Rosenberg GA. Cyclooxygenase-2 Inhibition Limits Blood-Brain Barrier Injury in Ischemic Stroke: Spatial And Permeability Data From Contrast-enhanced Magnetic Resonance Imaging. **International Stroke Conference 2009**. San Diego, CA, USA. February 18-20, 2009 (Oral presentation 147). Abstract published in *Stroke Vol. 40, No. 4, April 2009, p. 35 (147)*.
16. Candelario-Jalil E, Taheri S, Rosenberg GA. Cyclooxygenase-2 inhibition limits BBB injury in ischemic stroke: spatial and permeability data from contrast-enhanced fast MRI. **Gordon Research Conference "Barriers of the CNS"**. Tilton, NH, USA. June 22-28, 2008 (Oral presentation).
17. Candelario-Jalil E, Taheri S, Yang Y, Sood R, Grossetete M, Estrada EY, Fiebich BL, Rosenberg GA. Cyclooxygenase Inhibition Limits Blood-Brain Barrier Disruption following Intracerebral Injection of Tumor Necrosis Factor-alpha in the Rat. **37th Annual Meeting of the Society for Neuroscience**. San Diego, CA, USA. November 3-7, 2007 (Oral presentation 858.4).
18. Yang Y, Thompson JF, Walker EJ, Candelario-Jalil E, Estrada EY, Li L, Reichard RR, Khokha R, Ben C, Sang QXA, Cunningham LA, Rosenberg GA. Tissue inhibitor of metalloproteinase-3 (TIMP-3) facilitates delayed oligodendrocyte death in focal cerebral ischemia in rodent. **37th Annual Meeting of the Society for Neuroscience**. San Diego, CA, USA. November 3-7, 2007 (Poster 898.8/V4).
19. Graf S, Candelario-Jalil E, Hull M, Fiebich BL. Induction of prostaglandin E₂ receptor 3 (EP3) in SK-N-SH cells by IL-1beta: involvement of p38 MAPK and NF-kappaB. **Annual Meeting of the German Neurological Society**. Berlin, Germany. September 12-15, 2007. (Poster). Abstract published in *Aktuelle Neurologie, Vol. 34, Issue S2, p. 357 (2007)*.
20. Oliveira ACP, Candelario-Jalil E, Bhatia HS, Fiebich BL. Signaling pathways involved in microsomal prostaglandin E synthase-1 expression in activated primary microglia. **21st Biennial Meeting of the International Society for Neurochemistry and the 38th Annual Meeting of the American Society for Neurochemistry**. Cancun, Mexico. August 19-24, 2007. (Poster). Abstract published in *Journal of Neurochemistry, Vol. 102, Suppl. 1, August 2007, p. 71 (P.114)*.
21. Oliveira ACP, Candelario-Jalil E, Bhatia HS, Hull M, Fiebich BL. Regulation of microsomal prostaglandin E synthase-1 (mPGES-1) expression in activated primary rat microglia. **2007 European College of Neuropsychopharmacology (ECNP) Workshop for Young Scientists in Europe**. Nice, France. March 8-11, 2007 (Poster). Abstract published in *European Neuropsychopharmacology, Vol. 17, Suppl. 1, March 2007, pp. S32-S33*.
22. Candelario-Jalil E. Reduction of microglial activation by two natural antioxidant polyphenols: resveratrol and mangiferin. **Magdeburg Microglia Workshop "Microglia in Neuroinflammation and Stroke"**. Magdeburg, Germany. September 2005. (Oral presentation).

23. Candelario-Jalil E, Akundi RS, Lieb K, Appel K, Munoz E, Hüll M, Fiebich BL. Ascorbic acid enhances the inhibitory effect of aspirin on neuronal cyclooxygenase-2-mediated prostaglandin E₂ production. **20th Biennial Meeting of the International Society for Neurochemistry and the European Society for Neurochemistry**. Innsbruck, Austria. August 2005. (Poster). Abstract published in *Journal of Neurochemistry*, Vol. 94, Suppl. 2, August 2005, p. 180 (P.314).
24. Akundi RS, Candelario-Jalil E (presenting author), Hess S, Hüll M, Lieb K, Gebicke-Haerter PJ, Fiebich BL. Signal transduction pathways regulating cyclooxygenase-2 in lipopolysaccharide-activated primary rat microglia. **VII European Meeting on Glial Cell Function in Health and Disease EUROGLIA 2005**. Amsterdam, The Netherlands. May 2005. (Poster).
25. Candelario-Jalil E, Akundi RS, Lieb K, Appel K, Muñoz E, Hüll M, Fiebich BL. Ascorbic acid enhances the inhibitory effect of aspirin on neuronal cyclooxygenase-2-mediated prostaglandin E₂ production. **Neuroscience Upper Rhine Network (NEUREX) Meeting**. Strasbourg, France. April 2005. (Poster).
26. Candelario-Jalil E, González-Falcón A, García-Cabrera M, León OS, Fiebich BL. Post-ischemic Treatment with a Cyclooxygenase-2 inhibitor Reduces Blood-Brain Barrier Disruption and Leukocyte Infiltration following Transient Focal Cerebral Ischemia in Rats. **International Stroke Conference**. New Orleans, USA. February 2005. (Poster). Abstract published in *Stroke* Vol. 36, No. 2, February 2005, p. 471 (P170).
27. Candelario-Jalil E. Selective cyclooxygenase-2 inhibition as a neuroprotective strategy in ischemic brain injury: new experimental evidences. **Seminar at Merck-Frosst Canada**. Montreal, Canada. November 2004 (oral presentation).
28. Candelario-Jalil E, González-Falcón A, García-Cabrera M, León OS, Fiebich BL. "Involvement of cyclooxygenase-2 in blood-brain barrier damage and leukocyte infiltration following transient focal cerebral ischemia in rats". **4th Forum of European Neuroscience FENS**. Lisbon, Portugal. July 2004. (Poster).
29. Candelario-Jalil E, González-Falcón A, García-Cabrera M, León OS, Fiebich BL. "Involvement of cyclooxygenase-2 in blood-brain barrier damage and leukocyte infiltration following transient focal cerebral ischemia in rats". **11th Annual Meeting of the PsychoNeuroImmunology Research Society**. Titisee, Germany. May 2004. (Poster).
30. Candelario-Jalil E, León OS, Fiebich BL. "Selective cyclooxygenase-2 inhibition as potential therapy for brain injury resulting from cardiorespiratory arrest: new experimental evidences" **10th Polish-German Conference on Advances in Experimental and Clinical Pneumology**. Zakopane, Poland. May 2004. (Invited speaker). Abstract published in *Journal of Physiology and Pharmacology* Vol. 55, Suppl. III, September 2004, p. 156.
31. Candelario-Jalil E, González-Falcón A, García-Cabrera M, León OS, Fiebich BL. "Involvement of cyclooxygenase-2 in blood-brain barrier damage and leukocyte infiltration following transient focal cerebral ischemia in rats". **Neuroscience Upper Rhine Network (NEUREX) Meeting**. Freiburg, Germany. April 2004. (Poster).
32. Candelario-Jalil E, León OS. "New evidences on the role of cyclooxygenase isoenzymes in oxidative stress and neuronal injury following cerebral ischemia". **2nd Scientific Conference on Restorative Neurology**. Havana, Cuba. February, 2004. (Poster). Abstract published in *Restorative Neurology and Neuroscience* 2003, Vol. 21 (5-6), p. 269.
33. Candelario-Jalil E, González-Falcón A, García-Cabrera M, León OS, Springer JE. Involvement of cyclooxygenase-2 but not cyclooxygenase-1 in blood-brain barrier damage and leukocyte infiltration following transient focal cerebral ischemia in rats. **32nd Annual Meeting Society for Neuroscience**. Orlando, Florida, USA. November, 2002. (Poster). Abstract published in *Society for Neuroscience Abstracts* 2002 Nov 2-7; Vol. 28: 580.10.
34. Candelario-Jalil E, Sam S, León OS. "Neuroprotective efficacy of nimesulide against hippocampal neuronal damage following transient forebrain ischemia". **V Ibero-American Congress on Pharmaceutical Sciences**. Havana, Cuba. June, 2002. (Poster).

35. Candelario-Jalil E, León OS. "The highly selective cyclooxygenase-2 inhibitor DFU is neuroprotective when given several hours after transient cerebral ischemia in gerbils". **Second National Workshop on Inflammation**. Havana, Cuba. May, 2001. (Poster).
36. Candelario-Jalil E, Mhadu NH, León OS. "Time course of oxidative damage in different brain regions following transient cerebral ischemia in gerbils". **First Inter-American Conference on Pharmacy and Nutrition**. Havana, Cuba. April, 2001. (Poster).
37. Candelario-Jalil E, León OS. "Selective vulnerability to kainate-induced oxidative damage in different rat brain regions". **First Inter-American Conference on Pharmacy and Nutrition**. Havana, Cuba. April, 2001. (Poster).
38. Candelario-Jalil E. "Reduction of ischemic brain damage by *Mangifera indica L* extract and cyclooxygenase-2 inhibitors: Therapeutic implications". **First Inter-American Conference on Pharmacy and Nutrition**. Havana, Cuba. April, 2001. (Oral presentation).
39. Candelario-Jalil E. "Pathophysiological events associated to cerebral ischemia. Involvement of cyclooxygenase-2 in neuronal damage following the ischemic event". **4th Latin-American Congress on Pharmacy and Food Sciences**. Havana, Cuba. June, 2000. (Oral presentation).
40. Candelario-Jalil E, León OS. "Protective effects of nimesulide, a selective inhibitor of cyclooxygenase-2, against the neuronal injury induced by kainate and cerebral ischemia-reperfusion". **3rd International Symposium on Oxidative Stress**. Cuban Pharmaceutical Society. Havana, Cuba. November 1999. (Poster).
41. Candelario-Jalil E, León OS. "Effects of ozone oxidative preconditioning on the injury associated to hepatic ischemia-reperfusion in rats". **Scientific Workshop**, School of Pharmacy, University of Havana, Cuba. December, 1998. (Oral presentation).
42. León OS, Candelario-Jalil E, Levi M, Martínez G. "Free Radicals Scavengers in Alzheimer's Disease". **2nd National Workshop of Brain Aging and Alzheimer's Disease**. Havana, Cuba. November, 1998. (Round table).
43. Candelario-Jalil E, Al-Dalain SM, León OS. "Protective effects of ozone against anaerobic glycolysis and reactive oxygen species formation induced by carbon tetrachloride". **1st International Congress on Pharmacology (Cuban Pharmaceutical Society)**. Havana, Cuba. October, 1998. (Poster).

ASSOCIATION MEMBERSHIP

2000-present Society for Neuroscience (Member)

2007-present American Heart Association (AHA)/American Stroke Association (ASA) (Member)

2007-present International Society for Cerebral Blood Flow and Metabolism (ISCBFM) (Member)

2008-present International Society for Neurochemistry (ISN) (Member)

2009-present American Society for Neurochemistry (ASN) (Member)