

CURRICULUM VITAE

NAME: **Abbie C. Chapman, Ph.D.**
Formerly Abbie C. Johnson, PhD

CURRENT POSITION: Assistant Professor

ADDRESS: Binghamton University - SUNY
Psychology Department
Behavioral Neuroscience Program
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BIRTHDATE: September 2, 1986- Bar Harbor, ME

EDUCATION: **Ph.D. Neuroscience, 2015**
University of Vermont, Burlington, VT

B.S. Biology, 2008
Concentration: Neuroscience
University of Maine School of Biology & Ecology, Orono, ME

POSTITIONS/EMPLOYMENT

2024	<i>Assistant Professor, Tenure Track, Behavioral Neuroscience Program, Dept. of Psychology, Binghamton University, State University of New York, Binghamton, NY</i>
2019 – 2023	<i>Assistant Professor, Research Scholar Pathway, Dept. of Neurological Sciences, University of Vermont Larner College of Medicine, Burlington, VT</i>
2015 – 2019	<i>Postdoctoral Associate, Dept. of Neurological Sciences, Dr. Marilyn Cipolla's Laboratory, University of Vermont Larner College of Medicine, Burlington, VT</i>
2010 – 2015	<i>Ph.D. Student, Neuroscience Graduate Program, University of Vermont College of Medicine, Burlington, VT</i>
2012	<i>Teaching Assistant, Physical Therapy Gross Anatomy Course, University of Vermont College of Nursing and Health Sciences, Burlington, VT</i>
2012	<i>Teaching Assistant, Medical Neural Science Course, University of Vermont College of Medicine, Burlington, VT</i>
2008 – 2010	<i>Laboratory Research Technician, Dept. of Neurology, University of Vermont College of Medicine, Burlington, VT</i>
2004	<i>Research Assistant I, The Jackson Laboratory, Bar Harbor, ME</i>

HONORS AND AWARDS

- 2023 **Travel Award**, Cardiovascular Research Institute of Vermont to attend International Society for Cerebral Blood Flow and Metabolism BRAIN/BRAIN PET Biennial Meeting, Brisbane, Australia
- 2021 **Viridis Montis Early Career Investigator Research Competition Finalist**, Cardiovascular Research Institute of Vermont
- 2020 **Viridis Montis Early Career Investigator Research Competition Finalist**, Cardiovascular Research Institute of Vermont
- 2020 **Early Career Research Award**, Cardiovascular Research Institute of Vermont
- 2019 **Early Career Research Award**, Cardiovascular Research Institute of Vermont
- 2018 **Young Investigator Travel Award**, International Society for the Study of Hypertension in Pregnancy Biennial Meeting, Amsterdam, Netherlands
- 2017 **Outstanding Paper by an Associate Member Award**, Perinatal Research Society
- 2016 **Travel Award**, Cardiovascular Research Institute of Vermont to attend Society for Reproductive Investigation Annual Meeting, Montreal, Canada
- 2016 **Best New Investigator Poster Award**, Society for Reproductive Investigation
- 2016 **Travel Award**, Cardiovascular Research Institute of Vermont to attend International Society for the Study of Hypertension in Pregnancy Biennial Meeting, Sao Paulo, Brazil
- 2016 **Best Oral Presentation**, International Society for the Study of Hypertension in Pregnancy
- 2015 **NIH Young Investigator**, Perinatal Research Society
- 2015 **Durwood J. Smith Award** for Best Postdoctoral Presentation, Annual Pharmacology Retreat, University of Vermont
- 2014 **President's Presenter Award**, Society for Gynecological Investigation
- 2014 **Zuspan Award**, International Society for the Study of Hypertension in Pregnancy
- 2013 **Best Student Poster Presentation**, Neuroscience, Behavior & Health Research Forum, University of Vermont
- 2012 **Best Student Oral Presentation**, Neuroscience, Behavior & Health Research Forum, University of Vermont
- 2007 **Presidential Achievement Award** for Academic Excellence, University of Maine
- 2004 – 2007 **Recipient**, Marion Joy Morse Scholarship for premedical studies at University of Maine
- 2004 – 2006 **Recipient**, The Fred C. Lynam Scholarship for continuing education at University of Maine
- 2004 – 2006 **Top Scholar Award**, Academic scholarship for full tuition from University of Maine at Orono
- 2004 – 2005 **Recipient**, Scholarship from the Southwest Harbor Medical Center Clinic Committee for premedical studies at University of Maine
- 2004 **Salutatorian**, Mt. Desert Island High School, Bar Harbor, ME
- 2004 **Research Intern**, The Jackson Laboratory, Bar Harbor, ME

CURRENT RESEARCH SUPPORT

1R01 NS127284-03 NIH National Institute of Neurological Disorders and Stroke and National Institute on Aging

(Percentile: 9.0) 04/01/2022-03/31/2027

“The Role of the Hippocampal Vasculature in Vascular Cognitive Impairment and Dementia”

This project investigates changes in hippocampal arteriole function that occur with healthy aging and in the setting of chronic hypertension, and how these changes affect hippocampal hemodynamics, neurovascular coupling and neuroplasticity to accelerate cognitive decline.

PI: Abbie Chapman, PhD

PRIOR RESEARCH SUPPORT

20CDA35310239 American Heart Association Career Development Award (Percentile: 0.21)
07/01/2020-06/30/2023; NCE until 12/31/23

“Hippocampal Vascular Function in Chronic Hypertension and Post-Stroke Dementia”

The goal of this project is to investigate the novel contributions of the hippocampal vasculature to post-stroke memory impairment during chronic hypertension. Three critical aspects of cerebrovascular function will be investigated in the hippocampus, including vascular reactivity and perfusion, neurovascular coupling, and blood-brain barrier function as underlying mechanisms by which focal cerebral ischemic stroke causes hippocampal disruption and post-stroke dementia. Another goal of this project is career development; to cultivate professional skillsets necessary for a successful transition to independence and to lead a productive research program.

PI: Abbie C. Johnson, PhD; Primary Mentor: Mark T. Nelson, PhD; Secondary Mentor: Marilyn J. Cipolla, PhD

2R01 NS093289-06 NIH National Institute of Neurological Disorders and Stroke
07/01/21 – 6/30/26

“Targeting Pial Collaterals for Acute Stroke Treatment”

The goals of the project are to investigate mechanisms of improving collateral flow through leptomeningeal anastomotic arterioles during a large vessel occlusion to improve stroke outcome. My responsibilities consist of overseeing implantation of cerebral oxygen telemeters and measurements of brain tissue oxygenation and neurological deficits after ischemic stroke.

PI: Marilyn J. Cipolla, PhD

Role: Collaborator

R01 NS108455-04 NIH National Institute of Neurological Disorders and Stroke
07/01/18-06/30/23

“Hippocampal Arterioles and Brain Injury in Preeclampsia and Eclampsia”

This project investigates hippocampal arteriole structural changes during preeclampsia and how these changes affect hippocampal blood flow and cognitive impairment.

PI: Marilyn J. Cipolla, PhD

Role: Co-Investigator

Cardiovascular Research Institute of Vermont Early Career Research Award
07/01/20-06/30/21

“Hippocampal Vascular Mechanisms of Post-Stroke Dementia”

The goal of this project is to investigate the novel role of the hippocampal vasculature in post-stroke dementia during chronic hypertension, including investigation of changes in

hippocampal arteriolar function and hemodynamics in response to elevated circulating proinflammatory cytokines after ischemic stroke.

PI: Abbie C. Johnson, PhD, Mentor: Marilyn J. Cipolla, PhD

Cardiovascular Research Institute of Vermont Early Career Research Award

07/01/19-06/30/20

“Preliminary Data on Hippocampal Vascular Function in Chronic Hypertension and Post-Stroke Dementia”

The goals of this project are to provide proof-of-principle evidence that the blood-brain barrier is disrupted in the hippocampus during chronic hypertension that may increase the susceptibility of the hippocampus to long-lasting injury after ischemic stroke. Further, this project will provide critical preliminary data that hippocampal-dependent memory is disrupted secondary to ischemic stroke in a model of chronic hypertension.

PI: Abbie C. Johnson, PhD, Mentor: Marilyn J. Cipolla, PhD

14PRE18590005 American Heart Association Predoctoral Fellowship, 01/01/14-3/31/15

“The Role of the Blood-Brain Barrier in Seizure during Pregnancy and Preeclampsia”

The goal of this project was to understand pregnancy-specific changes occurring in the cerebrovasculature that may be contributing to seizure onset during normal pregnancy and preeclampsia and to understand the mechanism of action by which magnesium sulfate prevents seizure during preeclampsia.

PI: Abbie C. Johnson, Sponsor: Marilyn J. Cipolla, PhD

PEER REVIEWED PUBLICATIONS

Gannon O, Tremble SM, McGinn C, Guth R, Scoppettone N, Hunt RD, Prakash K, **Johnson AC**. Angiotensin II-mediated hippocampal hypoperfusion and vascular dysfunction contributes to vascular cognitive impairment in aged hypertensive rats. *Alzheimer's & Dementia: The Journal of the Alzheimer's Association* 2024; 20(2):890-903. doi: 10.1002/alz.13491. Epub 2023 oct 10.

Cipolla MJ, Tremble SM, DeLance N, **Johnson AC**. Worsened stroke outcome in a model of preeclampsia is associated with poor collateral flow and oxidative stress. *Stroke* 2023; 54(2):354-363. doi: 10.1161/STROKEAHA.122.041637.

Whitaker EE, **Johnson AC**, Tremble SM, McGinn C, DeLance N, Cipolla MJ. Cerebral blood flow autoregulation in offspring from experimentally preeclamptic rats and the effect of age. *Front Physiol* 2022; doi: 10.3389/fphys.2022.924908. Epub 2022 June 6.

Johnson AC, Tremble SM, Cipolla MJ. Experimental preeclampsia causes long-lasting hippocampal vascular dysfunction and memory impairment. *Front Physiol* 2022; doi: 10.3389/fphys.2022.889918. Epub 2022 May 9.

Johnson AC, Uhlig F, Einwag Z, Cataldo N, Erdos B. The neuroendocrine stress response impairs hippocampal vascular function and memory in male and female rats. *Neurobiol Dis* 2022; doi: 10.1016/j.nbd.2022.105717. Epub 2022 April 5.

Cipolla MJ, Tremble SM, DeLance N, Allison D, **Johnson AC**. Treatment with apocynin selectively restores hippocampal arteriole function and seizure-induced hyperemia in a model of preeclampsia. *J Cereb Blood Flow Metab* 2022; doi: 10.1177/0271678X221080092. Epub 2022 February 9.

Whitaker EE, **Johnson AC**, Miller JE, Lindner DP, Cipolla MJ. Abnormal development of cerebral arteries and veins in offspring of experimentally preeclamptic rats: Potential role in perinatal stroke. *Mech Ageing Dev* 2021; doi: 10.1016/j.mad.2021.111491. Epub 2021 April 14.

- Johnson AC**, Li Z, Orfila JE, Herson PS, Cipolla MJ. Hippocampal network dysfunction as a mechanism of early-onset dementia after preeclampsia and eclampsia. *Prog in Neurobiol* 2020; doi: 10.1016/j.pneurobio.2020.101938.
- Rosehart AC, **Johnson AC**, Dabertrand F. Ex vivo pressurized hippocampal capillary-parenchymal arteriole preparation for functional study. *Journal of Visualized Experiments* 2019 Dec 18(154); doi: 10.3791/60676.
- Johnson AC**, Miller JE, Cipolla MJ. Memory impairment in spontaneously hypertensive rats is associated with hippocampal hypoperfusion and hippocampal vascular dysfunction. *J Cereb Blood Flow Metab* 2019; doi: 10.1177/0271678X19848510.
- Johnson AC**, Cipolla MJ. Impaired function of cerebral parenchymal arterioles in experimental preeclampsia. *Microvasc Res* 2018 April 26; 119:64-72. doi:10.1016/j.mvr.2018.04.007.
- Johnson AC**, Hammer ES, Sakkaki S, Tremble SM, Holmes GL, Cipolla MJ. Inhibition of blood-brain barrier efflux transporters promotes seizure in pregnant rats: Role of circulating factors. *Brain Behav Immun* 2017 July. pii: S0889-1591(17)30233-7. doi: 10.1016/j.bbi.2017.07.017.
- Toufexis DJ, Lipatova O, **Johnson AC**, Abizaid A. Food-restriction lowers the acoustic startle response in both male and female rats, and in combination with acute ghrelin injection, abolishes the expression of fear-potentiated startle in male rats. *J Neuroendocrinol* 2016 Nov; 28(11). doi: 10.1111/jne.12436.
- Johnson AC**, Cipolla MJ. Altered hippocampal arteriole structure and function in a rat model of preeclampsia: Potential role in impaired seizure-induced hyperemia. *J Cereb Blood Flow Metab* 2017; 37(8): 2857-2869. doi: 10.1177/0271678X16676287. Epub 2016 Nov 1.
- Johnson AC**, Nagle KJ, Tremble SM, Cipolla MJ. The contribution of normal pregnancy to eclampsia. *PLoS One* 2015; 10(7):e0133953. doi: 10.1371/journal.pone.0133953.
- Johnson AC**, Tremble SM, Chan SL, Moseley J, LaMarca B, Nagle K, Cipolla MJ. Magnesium sulfate treatment reverses seizure susceptibility and decreases neuroinflammation in a rat model of severe preeclampsia. *PLoS One* 2014; 9(11):e113670. doi: 10.1371/journal.pone.0113670.
- Chapman AC**, Cipolla MJ, Chan SL. Effect of pregnancy and nitric oxide on the myogenic vasodilation of posterior cerebral arteries and the lower limit of cerebral blood flow autoregulation. *Repro Sci* 2013; 20(9): 1046-54.
- Gokina NI, Chan SL, **Chapman AC**, Oppenheimer K, Jetton TL, Cipolla MJ. Inhibition of PPAR γ during rat pregnancy causes intrauterine growth restriction and attenuation of uterine vasodilation. *Front Physiol* 2013; 23(4):134. doi: 10.3389/fphys.2013.00184.
- Cipolla MJ, Pusic AD, Grinberg YY, **Chapman AC**, Poynter MY, Kraig RP. Pregnant serum induces neuroinflammation and seizure activity via TNF α . *Exp Neurol* 2012; 234(2): 398-404.
- Chan SL, **Chapman AC**, Sweet JG, Gokina NI, Cipolla MJ. Effect of PPAR γ inhibition during pregnancy on posterior cerebral artery function and structure. *Front Physiol* 2010; 1:130. doi:10.3389/fphys.2010.00130.
- Amburgey OA, **Chapman AC**, May V, Bernstein IM, Cipolla MJ. Plasma from preeclamptic women increases blood-brain barrier permeability: role of vascular endothelial growth factor signaling. *Hypertension* 2010; 56(5):1003-08.
- Roberts TJM, **Chapman AC**, Cipolla MJ. PPAR- γ agonist rosiglitazone reverses increased cerebral venous hydraulic conductivity during hypertension. *Am J Physiol Heart Circ Physiol* 2009; 297(4): H1347-53.

INVITED REVIEWS

Johnson AC. Focused Update in Cerebrovascular Disease: Hippocampal Vascular Supply and Its Role in Vascular Cognitive Impairment. *Stroke* 2023; 54:673-685. doi: 10.1161/STROKEAHA.122.038263.

Johnson AC, Cipolla MJ. The Cerebral Circulation during Pregnancy: Adapting to Preserve Normalcy. *Physiology*. 2015; 30(2):139-147.

BOOK CHAPTERS

Johnson, AC. Physiology of the cerebrovascular adaptation to pregnancy. In: Steegers EAP, Cipolla MJ, Miller EC (Eds) *Handbook of Clinical Neurology: Neurology and Pregnancy, Pathophysiology and Patient Care*, Volume 171. San Diego: Elsevier BV, 2020: 85-96.

Chapman, AC, Cipolla MJ, Payne S. Regulation of Cerebral Blood Flow and Metabolism. In: *Stroke: Pathophysiology, Diagnosis and Management*; 8th Edition. Elsevier. (in preparation)

TEACHING AND INSTRUCTING

2024 *Co-Instructor*, PSYC 363 Behavioral Neuroscience Laboratory
2020 – 2023 *Co-Instructor*, Writing Working for Incoming Neuroscience Graduate Students
2022 *Instructor*, BME 296/396 “Clinical Devices & Instruments”

PROFESSIONAL SERVICE AND COMMITTEES

2024 – 2028 *Member*, NIH Brain Injury and Neurovascular Pathologies Study Section
2024 *Ad-Hoc Reviewer*, NIH Special Emphasis Panel, Pathological Mechanisms Underlying Alzheimer’s Disease
2023 *Ad-Hoc Reviewer*, NIH Brain Injury and Neurovascular Pathologies Study Section
2023 *Mentor*, Council for Hypertension Advisory and Mentoring Program, American Heart Association Hypertension Scientific Sessions
2023 *Judge*, American Heart Association Council on Hypertension Trainee Advisory Committee Poster Competition at American Heart Association Hypertension Scientific Sessions
2023 *Peer Reviewer*, Vermont Center for Cardiovascular and Brain Health Center of Biomedical Research Excellence Project Director Applications
2023 *Session Moderator*, American Heart Association International Stroke Conference
2023 *Peer Reviewer*, American Heart Association Brain Sciences Committee, Career Development Award Applications
2022 *Peer Reviewer*, Vermont Center for Cardiovascular and Brain Health Center of Biomedical Research Excellence Pilot Grant Award Applications
2022 *Data Blitz Judge*, Neuroscience Behavior, Health and Research Forum, Vermont Chapter of the Society for Neuroscience
2021 *Data Blitz Judge*, Neuroscience Behavior, Health and Research Forum, Vermont Chapter of the Society for Neuroscience
2020 *Poster Judge*, Neuroscience Behavior, Health and Research Forum, Vermont Chapter of the Society for Neuroscience
2018 *Session Moderator*, Society for Reproductive Investigation Annual Meeting
2015 – 2017 *Member*, Cardiovascular Research Institute of Vermont Early Career Advisory Committee

UNIVERSITY SERVICE AND COMMITTEES

2024 – 2025	<i>Member</i> , Psychology Department Colloquium Committee
2024 – 2025	<i>Member</i> , Provost's Cluster Hire on Early Life Adversity and Mental Health Search Committee
2024	<i>Member</i> , Behavioral Neuroscience Program Preliminary Exam Committee, Binghamton University – SUNY
2024	<i>Chair</i> , Undergraduate Psychology Honors Thesis Committee, Binghamton University – SUNY
2024	<i>Member</i> , Undergraduate Psychology Honors Thesis Committee, Binghamton University – SUNY
2024	<i>Member</i> , Center for Development and Behavioral Neuroscience, Binghamton University – SUNY
2024	<i>Member</i> , Behavioral Neuroscience Program PhD Dissertation Committee, Binghamton University – SUNY
2024	<i>Member</i> , Behavioral Neuroscience Program Master's Thesis Committee, Binghamton University – SUNY
2022 – 2023	<i>Member</i> , Neuroscience Graduate Program Admissions Committee, University of Vermont
2022	<i>Chair</i> , Neuroscience Graduate Program Qualifying Exam Committee, University of Vermont
2022	<i>Member</i> , Neuroscience Graduate Program PhD thesis committee, University of Vermont
2021	<i>Member</i> , Neuroscience Graduate Program Qualifying Exam Committee, University of Vermont
2014 – 2016	<i>Member</i> , Dept. of Neurological Sciences Grand Rounds Committee, University of Vermont
2013 – 2015	<i>Co-organizer</i> , Neurological Sciences Translational Journal Club for Residents, Fellows, Post-Docs and Graduate Students, University of Vermont
2014	<i>Member</i> , Neuroscience Graduate Program Academic Program Review Committee, University of Vermont
2013	<i>Coordinator</i> , Neuroscience Graduate Program Journal Club, University of Vermont

COMMUNITY SERVICE AND OUTREACH

2024	<i>Judge</i> , NYS Tri-County Science & Technology Fair (virtual)
2014	<i>Volunteer</i> , Annual Vermont Brain Bee
2012	<i>Volunteer</i> , ECHO Exhibit Our Body: The Universe, Burlington, Vermont
2011	<i>Judge</i> , Vermont State Math and Science Fair
2011	<i>Volunteer</i> , Annual Vermont Brain Bee

PROFESSIONAL MEMBERSHIPS

2021 – present	Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment
2020 – present	American Physiological Society
2019 – present	International Society of Cerebral Blood Flow and Metabolism
2016, '18, present	Society for Neuroscience
2013 – present	American Heart Association, Early Career Member
2019 – 2023	Association for Women in Science, Vermont Affiliate Group

2009 – 2023 Vermont Chapter of the Society for Neuroscience
2017 – 2019 National Postdoctoral Association
2015 – 2019 American Association for the Advancement of Science
2015 – 2018 Perinatal Research Society, Associate Member

PEER REVIEWER

Pharmaceuticals
Neuroscience
Pregnancy Hypertension
Circulation
Theranostics
Journal of Stroke and Cerebrovascular Diseases
American Journal of Obstetrics & Gynecology
Frontiers in Neuroendocrinology
Alzheimer's & Dementia
AHA Scientific Statements
Frontiers in Physiology
American Journal of Physiology Heart & Circulatory Physiology
Brain Imaging and Behavior
Aging

Brain Research
Hypertension in Pregnancy
Biology of Sex Differences
Behavioural Brain Research
Journal of Neuroinflammation
Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring
Stroke
PLOS One
Cerebral Cortex
British Journal of Pharmacology
Journal of Cerebral Blood Flow & Metabolism
Hypertension
Physiology & Behavior
Molecular Biology Reports
Psychopharmacology

AD HOC PEER REVIEWER

Proteomics
Neuropeptides
Neurology

ABSTRACTS

Deng B, Kalish RL, Reulbach JC, Baumoel EJ, Shehryar A, DeMarco GM, **Chapman AC**. Sex differences in learning and memory function during chronic hypertension. Accepted for Poster Presentation, Society for Neuroscience Annual Meeting, Oct 2024.

Kalish RL, Shehryar A, Deng B, DeMarco GM, Baumoel EJ, **Chapman AC**. Learning and memory impairment during perimenopause: effects of accelerated ovarian failure in a model of vascular dementia. Accepted for Poster Presentation, Society for Neuroscience Annual Meeting, Oct 2024.

Shehryar A, Kalish RL, Baumoel EJ, Deng B, **Chapman AC**. Investigating the effects of chronic hypertension and menopause on learning and memory. Poster presentation at Binghamton's Louis Stokes Alliance for Minority Participation Program Summer Research Symposium, Binghamton, NY, July 2024.

DeCara C, White S, **Chapman AC**. Investigation of capillary density changes during chronic hypertension as an underlying mechanism of reduced hippocampal perfusion and memory dysfunction. Poster presentation at the Vermont Center for Cardiovascular and Brain Health Research Symposium, Burlington, VT, June 2024.

Reulbach JC, Baumoel E, **Johnson AC**. Effects of chronic hypertension and sex on reference memory and spatial working memory. *Hypertension* 2023; 10.1161/hyp.80.suppl_1.096.

- Krant N, Tremble S, **Johnson AC**. Hippocampal neuroinflammation occurs after focal cerebral ischemic stroke that may contribute to post-stroke memory loss. *Hypertension* 2023; 10.1161/hyp.80.suppl_1.013.
- Johnson AC**, Tremble S, McGinn C, Guth R, Scoppettone N, Prakash K. Angiotensin II-Mediated Hippocampal Hypoperfusion and Vascular Dysfunction Impairs Memory in Aged Spontaneously Hypertensive Rats. Accepted for oral presentation at the BRAIN/BRAIN PET Meeting in June, 2023.
- Johnson AC**, Guth R, Scoppettone N. Hippocampal Vascular Dysfunction is Present Prior to the Onset of Age-Related Memory Decline in Chronic Hypertension. Accepted for poster presentation at the American Physiology Summit April 2023.
- Cipolla MJ, Tremble SM, DeLance N, **Johnson AC**. Worsened Stroke Outcome in a Model of Preeclampsia is Associated with Poor Collateral Flow and Oxidative Stress. Accepted for poster presentation at International Stroke Conference February 2023.
- Johnson AC**, Tremble SM, Cipolla MJ. Oxidative Stress Impairs Hippocampal Vascular Function During Chronic Hypertension. Accepted for poster presentation at BRAIN/BRAIN PET Meeting May, 2022.
- Cataldo N, Uhlig F, **Johnson AC**, Erdos B. Analysis of Cerebrovascular Architecture in Experimental Models of Hypertension and Chronic Neuroendocrine Stress. Accepted for poster presentation at Experimental Biology Meeting April 2022.
- Whitaker EE, **Johnson AC**, Tremble SM, Cipolla MJ. Exposure to Preeclampsia In Utero Leads to Cerebrovascular Dysfunction in Offspring. Accepted for poster presentation at the International Anesthesia Society Annual Meeting March 2022.
- Whitaker EE, **Johnson AC**, Tremble SM, Cipolla MJ. Exposure to Preeclampsia In Utero Leads to Cerebrovascular Dysfunction in Offspring. Accepted for oral presentation at the Association of University Anesthesiologists Annual Meeting March 2022.
- Johnson AC**, Uhlig F, Erdos B. Hippocampal Vascular Dysfunction and Impaired Memory in a Neuroendocrine Model of Stress and Hypertension. *FASEB J* 2021; 35(S1): 1-1.
- Johnson AC**, Li Z, Orfila JE, Herson PS, Cipolla MJ. Experimental Preeclampsia Causes Persistent Impairment of Hippocampal-Dependent Memory and Network Function that is Exacerbated by Status Convulsions. *FASEB J* 2020; 34(S1): 1-1.
- Johnson AC**, Cipolla MJ. Seizure-Induced Cognitive Impairment in Pregnancy and Preeclampsia: Effects of Prolonged Seizures and Anti-Seizure Treatments. *Society for Neuroscience* 2018; 329.01.
- Johnson AC**, Cipolla MJ. Seizure-Induced Cognitive Impairment in a Rat Model of Preeclampsia: Effects of Multiple Seizures and Anti-Seizure Treatments. *Preg Hypertens* 2018; 13:S29.
- Johnson AC**, Cipolla MJ. Impaired Function of Cerebral Parenchymal Arterioles in Experimental Preeclampsia. *Repro Sci* 2018; 25 (1 Supplement): 82A.
- Johnson AC**, Whitbeck A, Miller J, Cipolla MJ. Impaired Cognitive Function in Experimental Preeclampsia. *Repro Sci* 2018; 25 (1 Supplement): 242A.
- Bergman L, **Johnson A**, Tremble S, Akerud H, Cipolla M. The Cerebral Biomarker S100B is Elevated in a Rat Preeclampsia Model and Correlates with Seizure Threshold. Royal College of Obstetricians & Gynaecologists World Congress 2017 (EP709).
- Bergman L, **Johnson A**, Tremble S, Akerud H, Cipolla M. The Cerebral Biomarker NSE is Elevated Post-Seizure in a Rat Preeclampsia Model and Correlates with Posterior Brain Water Content. Royal College of Obstetricians & Gynaecologists World Congress 2017 (EP710).
- Johnson AC**, Cipolla MJ. Decreased Dilation of Hippocampal Arterioles in a Rat Model of Preeclampsia. *Preg Hypertens* 2016; 6(3): 152-53. doi:10.1016/j.preghy.2016.08.035.

- Johnson AC**, Morielli A, Tremble S, Cipolla M. Pregnancy Decreases Hippocampal Slice Excitability and Activity of NMDA Receptors. *Repro Sci* 2016; 23 (1 Supplement): 118A.
- Johnson AC**, Sakkaki S, Cipolla M. Inhibition of Efflux Transporters at the Blood-Brain Barrier Induces Spontaneous Seizure in Pregnant Rats. *Repro Sci* 2016; 23 (1 Supplement): 118A.
- Johnson AC**, Cipolla MJ. Magnesium Sulfate (MgSO₄) Increases Seizure Threshold via Reduced Neuroinflammation in a Rat Model of Preeclampsia. *Preg Hyperten* 2015; 5(1):27 [53-OR].
- Johnson AC**, Chan SL, Moseley J, LaMarca B, Cipolla MJ. The Effect of Experimental Preeclampsia on Cerebral Blood Flow Autoregulation (CBFAR) and Cerebrovascular Function. *FASEB J* 2014; 28:680.22.
- Merhi Z, Cooper K, Doswell A, **Johnson AC**, Cipolla MJ. Pregnancy and Preeclampsia Alter the Rat Hypothalamic-Ovarian Reproductive Axis. *Repro Sci* 2014; 21 (3 Supplement): 329A.
- Johnson AC**, Cipolla MJ. Pregnancy Increases Seizure-Induced Vasogenic Brain Edema in Rats. *Repro Sci* 2014; 21 (3 Supplement): 284A.
- Johnson AC**, Tremble SM, Cipolla MJ. Decreased Seizure Threshold during Pregnancy and Experimental Preeclampsia: Roles for GABA_A Receptors and Microglial Activation. *Repro Sci* 2014; 21 (3 Supplement): 100A.
- Chapman AC**, Chan SL, Cipolla MJ. An Enhanced Myogenic Vasodilatory Response to Hypotension in Posterior Cerebral Arteries of Pregnant Rats is Nitric Oxide Dependent. *Repro Sci* 2012; 19 (3 Supplement): 175A.
- Chapman AC**, Toufexis DJ. The Role of Ghrelin in the Expression of Cued-Fear Conditioning. *Society for Neuroscience* 2011; 302.11.
- Cipolla MJ, Chan SL, **Chapman AC**, Godfrey JA. Inhibition of PPAR γ during pregnancy causes inward remodeling of brain parenchymal arterioles. *FASEB J* 2010; 24:979.4.
- Chan SL, **Chapman AC**, Cipolla MJ. Effect of Peroxisome Proliferator-activated Receptor Gamma (PPAR γ) Inhibition during Pregnancy on Resistance Artery Function. *Repro Sci* 2010; 17 (3 Supplement): 326A.
- Amburgey ÖA, **Chapman AC**, Bernstein IM, Cipolla MJ. Acute Exposure to Preeclamptic Plasma Increases Blood-Brain Barrier Hydraulic Conductivity: Role of VEGF. *Repro Sci* 2010; 17 (3 Supplement): 327A.
- Amburgey ÖA, **Chapman AC**, Bernstein IM, Cipolla MJ. Effects of Preeclamptic Plasma on Cerebral Artery Reactivity, Tone and Endothelial Vasodilator Production. *Repro Sci* 2010; 17 (3 Supplement): 329A.
- Gokina NI, Kuzina OY, Vance A, **Chapman AC**, Cipolla MJ. Inhibition of PPAR γ during Rat Pregnancy Causes Intrauterine Growth Restriction and Attenuation of Endothelium-Dependent Uteroplacental Vasodilation. *Repro Sci* 2010; 17 (3 Supplement): 152A.

ORAL PRESENTATIONS

The Hippocampal Vascular Supply and its Role in Vascular Cognitive Impairment and Dementia.

Dept. of Neurological Sciences Grand Rounds, University of Vermont Larner College of Medicine, Burlington, VT, April, 2022

The Role of the Hippocampal Vasculature in Vascular Cognitive Impairment and Dementia.

Vermont Center for Cardiovascular and Brain Health Symposium, Burlington, VT, June 2021

Impaired Hippocampal Neuroplasticity as an Underlying Mechanism of Early-Onset Dementia after Preeclampsia and Eclampsia

Viridis Montis Early Career Investigator Challenge in Cardiovascular Disease, Cardiovascular Research Institute of Vermont, Burlington, VT, February 2021

Memory Impairment during Chronic Hypertension is Associated with Hippocampal Hypoperfusion and Hippocampal Vascular Dysfunction

Viridis Montis Early Career Investigator Challenge in Cardiovascular Disease, Cardiovascular Research Institute of Vermont, Burlington, VT, February 2020

Status Convulsions during Pregnancy and Experimental Preeclampsia Cause Long-Lasting Hippocampal Dysfunction

Dept. of Pharmacology Annual Research Retreat, University of Vermont, Burlington, VT, November 2019

Research in the Cipolla Lab

Dept. of Neurological Sciences Research Retreat, University of Vermont, Burlington, VT, March, 2019

Seizure-Induced Cognitive Impairment in a Rat Model of Preeclampsia: Effects of Multiple Seizures and Anti-Seizure Treatments

Dept. of Pharmacology Annual Research Retreat, University of Vermont, Stowe, VT, November, 2018

Seizure-Induced Cognitive Impairment in a Rat Model of Preeclampsia: Effects of Multiple Seizures and Anti-Seizure Treatments

International Society for the Study of Hypertension in Pregnancy World Congress, Amsterdam, Netherlands, October, 2018

Impaired Function of Cerebral Parenchymal Arterioles in Experimental Preeclampsia

Society for Reproductive Investigation Annual Meeting, San Diego, CA, March, 2018

The Effect of Preeclampsia on the Function of the Neonatal Cerebrovasculature

Dept. of Pharmacology Annual Research Retreat, University of Vermont, Stowe, VT, November, 2017

Altered Hippocampal Arteriole Structure and Function in a Rat Model of Preeclampsia: Potential Role in Impaired Seizure-Induced Hyperemia

Northern New England Neurological Society Meeting, Essex, VT, October, 2016

Decreased Dilation of Hippocampal Arterioles in a Rat Model of Preeclampsia

International Society for the Study of Hypertension in Pregnancy World Congress, Sao Paulo, Brazil, October, 2016

The Role of Blood-Brain Barrier Efflux Transporters in Seizure Prevention during Pregnancy

Dept. of Pharmacology Annual Research Retreat, University of Vermont, Stowe, VT, November, 2015

Mechanisms of Seizure during Pregnancy and Preeclampsia

Dept. of Neurological Sciences Grand Rounds, University of Vermont College of Medicine, Burlington, VT, February, 2015

Magnesium Sulfate (MgSO₄) Increases Seizure Threshold via Reduced Neuroinflammation in a Rat Model of Preeclampsia

International Society for the Study of Hypertension in Pregnancy World Congress, New Orleans, LA, October, 2014

The Effect of Experimental Preeclampsia on Cerebral Blood Flow Autoregulation (CBFAR) and Cerebrovascular Function

Experimental Biology Meeting, San Diego, CA April, 2014

Decreased Seizure Threshold during Pregnancy and Experimental Preeclampsia: Roles for GABA_A Receptors and Microglial Activation

Dept. of Ob/Gyn & Repro Sci Grand Rounds, University of Vermont College of Medicine, Burlington, VT, April, 2014

Decreased Seizure Threshold during Pregnancy and Experimental Preeclampsia: Roles for GABA_A Receptors and Microglial Activation

Society for Gynecological Investigation Meeting, Florence, Italy, March, 2014

The Effect of Pregnancy and Nitric Oxide on the Myogenic Vasodilation of Posterior Cerebral Arteries and the Lower Limit of Cerebral Blood Flow Autoregulation

Dept. of Pharmacology Annual Research Retreat, University of Vermont, Stowe, VT, November, 2012

Mechanisms of the Cerebral Myogenic Vasodilatory Response to Acute Hypotension in Female Rats

Behavior & Health Research Forum, University of Vermont Neuroscience, Burlington, VT, February, 2012