



P20GM103653 Harrington(PI) 09/01/19 – 08/31/21  
Using MRI to Examine the Impact of prenatal ZIKV infection on the development of hippocampal and cortical structures  
Pilot Project = \$9,000 National Institute of General Medical Sciences  
Role: Schwarz (Pilot Investigator)

P20GM103653 Harrington(PI) 09/01/19 – 08/31/21  
Using MRI to Investigate the Movement of Gut Microbial Products throughout the Body and Into the Brain to Affect Neonatal Brain Health  
Pilot Project = \$9,000 National Institute of General Medical Sciences  
Role: Schwarz (Co-Pilot Investigator) with Dr. Catherine Leimkuhler Grimes (Chemistry)

### **Awards and Honors**

- 2018 Panel Travel Fellow Winter Conference on Brain Research 2018
- 2017 **\*\*Delaware Neuroscientist of the Year**, Delaware Center for Neuroscience Research\*\*
- 2017 Apex Award, Delaware Center for Neuroscience Research
- 2016 **Frank Beach Young Investigator Award**, *Society for Behavioral Neuroscience*
- 2016 University of Maryland School of Medicine, Graduate Program in Life Sciences, **Alumnus of the Year Award**
- 2016 **NARSAD Young Investigator Award**, Brain & Behavior Research Foundation, grant selected and recognized for private funding from the 'P&S Fund'
- 2015 University of Delaware nominated Pew Biomedical Scholar applicant for 2016.
- 2013 University of Delaware nominated Searle Scholar applicant for 2014.
- 2012 Travel Award Winner American College of Neuropharmacology (ACNP) annual meeting Hollywood, FL.
- 2012 Selected to present at the NIDA Frontiers in Research Minisymposium Poster Session, New Orleans, LA
- 2010 Winner Society for Neuroscience (SFN) *Postdoctoral Fellow Travel Award* to attend SFN Annual Meeting in San Diego, 2010.
- 2010 **Postdoctoral National Research Service Award (F32DA030136) from the NIH**
- 2010 Research from *Endocrinology* article highlighted/reviewed by a member of F1000 faculty.
- 2009 Winner *Postdoctoral Award for Professional Development* from Duke University
- 2009 Winner *Travel Award* to attend the Early Life Programming and Neurodevelopmental Disorders Meeting in Philadelphia, PA.
- 2009 Winner *Travel Award* to attend the Society for Behavioral Neuroendocrinology Annual Meeting in East Lansing, MI.
- 2008 Research from *Neuron* article highlighted/reviewed by two members of F1000 faculty. 2008 Research from *Neuron* article was selected for a *Nature Reviews* Highlight entitled, "What Maketh the Man?"
- 2008 Winner 'Best Poster Presentation' – Graduate Research Conference, Baltimore 2008  
Elected to Young Investigator Councilor of the Organization for the Study of Sex Differences (OSSD).
- 2008 **Pre-doctoral National Research Service Award (F31NS055518) from the NIH**
- 2007 Winner – Florence P. Haseltine Award for Best Presentation by a Young Investigator at the

First Annual OSSD Meeting, Washington DC.

2007 Winner 'Best Oral Presentation' – Graduate Research Conference Baltimore, MD 2007  
Selected as a "Young Investigator" at the Workshop on Steroid Hormones and Brain Function Meeting in Breckenridge, CO.

2004 *Society for Neuroscience* Annual meeting – Abstract selected for Data Blitz at Satellite meeting on Sleep and Circadian Rhythms; San Diego, CA

2000 Member Psi Chi National Psychology Honors Society

### **Memberships**

2003 – present Society for Neuroscience (SfN)  
2003 – present Society for Behavioral Neuroendocrinology (SBN)  
2007 – present Organization for the Study of Sex Differences (OSSD)  
2008 – present Psychoneuroimmunology Research Society (PNIRS)  
2017 – present American Association for the Advancement of Science (AAAS)

### **External Service and Leadership**

- **Treasurer** for the Society for Behavioral Neuroendocrinology (SBN), 2021 - 2023
- Department of Defense, Autism Research Grant Panel Member October 2020
- Psychoneuroimmunology Research Society Program Committee Annual Meeting 2021 (virtual)
- Organization for the Study of Sex Differences (OSSD) 2020 (cancelled) and 2021 (virtual) Annual Meeting, Program Chair
- **National Institutes of Health consistent ad hoc reviewer for Developmental Brain Disorders (DBD) – currently being promoted to standing member for Sept 2021**
- Canadian Institutes of Health Research College of Reviewers
- Peer Review Committee Member, *Sex as a Variable in Biomedical or Translational Research*, Canadian Institutes of Health Research, Canada.
- Organization for the Study of Sex Differences **Council Member Ex Officio**, 2015-present
- Organizer, A Stakeholder's Forum, "*Introducing Sex as a Variable in Preclinical Research: Metrics and Evaluation*", OSSD 2015 Annual Meeting, Stanford University, CA.
- **Secretary** for the *Organization for the Study of Sex Differences*, April 2013 – April 2015
- **Expert Consultant/Reviewer** for the **World Health Organization**  
Department of Reproductive Health and Research: Technical Consultation on Hormonal Contraceptive Use during Lactation and Effects on the Neonatal Brain. Geneva Switzerland, October 2008-present.
- **Young Investigator Councilor** – *Organization for the Study of Sex Differences*; elected June 2008 – June 2010.

### **Peer-Reviewed Articles (45 published. 6 in preparation. submitted, or revision)**

#### **Google Scholar H-index = 30**

1. Pluchino J, Della Valle R, **Schwarz JM**. Regional differences in various risk factors for postpartum depression: Applying mixed models to the PRAMS dataset. *Archives of Women's Mental Health*; *In Preparation*.
2. Desai R, Haas NA, Gallamoza B, Lemanski E, Sherer ML, Parcels MS, **Schwarz JM**. Using high resolution MRI to examine the subtle but long-term consequences of prenatal ZIKV infection in offspring. Special Issue on "Pediatric viral infection long-term consequences" Invitation: *Virology*; *Invited Manuscript in Preparation*.
3. Sherer ML, Lemanski E, Tavlarides-Hontz P, Parcels MS, **Schwarz JM**. Effect of prenatal

ZIKV infection on later-life neurogenesis in the brain. Special Issue on “Viral Infection and Cell Proliferation” Invitation: *Virology*; *Invited Manuscript in Preparation*.

4. Bielicki MB, Habash N, Haas NA, **Schwarz JM**. Cellular Immunopharmacology: Using Intra-hippocampal depletion of microglia as a tool to examine the role of microglia in the ontogeny of learning and deficits produced by early-life immune dysregulation. *Journal of Neuroscience Research*; *Manuscript in Preparation*.
5. Turano A, McAuley EM, Muench MC, **Schwarz JM**. Examining the impact of neuroimmune dysregulation on social behavior in male and female juvenile rats. *Behavioral Brain Research*, *Manuscript under review*.
6. Osborne BF, Beamish SB, **Schwarz JM**. The effects of early-life immune activation on microglia-mediated neuronal remodeling and the associated ontogeny of hippocampal-dependent learning in juvenile rats. *Brain, Behavior and Immunity*; *Resubmitted*.
7. Spielberg JM, **Schwarz JM**, Matyi M. (2019) Anxiety in Transition: Neuroendocrine mechanisms supporting the development of affect disorders in adolescence and young adulthood. *Frontiers in Neuroendocrinology*; 55: 100791.
8. Sherer ML, Khanal P, Talham G, Brannick EM, Parcels MS, and **Schwarz JM**. (2019) Zika virus infection of pregnant rats and associated neurological consequences in the offspring. *PloS One*; Jun 20, 14(6): e0218539.
9. **Schwarz JM**. (2019) Frank Beach Award Winner – The future of mental health research: Examining interactions of the immune, endocrine and nervous systems between mother and infant and how they affect mental health. *Hormones and Behavior*; 114: 104521.
10. Gomez J, Haas NA, and **Schwarz JM**. (2019) An IL-6 receptor antagonist effectively attenuates postpartum anhedonia in the female rat, but has no effect on anhedonia precipitated by sub chronic stress. *Psychopharmacology*; 236(10): 2983-2995.
11. Lawrence JH, Sherer ML, Tavlarides-Hontz P, Parcels MS, and **Schwarz JM**. (2019) An investigation of the immune response to Zika virus infection in neonatal rat brain cells. *J. Neuroimmunology*; July 15, 332: 73-77.
12. Sharma R, van Mil S, Melanson B, Thomas B, Rooke J, Mallet JF, Matar C, **Schwarz JM**, Ismail N. (2019) Programming effects of pubertal lipopolysaccharide treatment in male and female CD-1 mice. *J. Immunology*; Apr 1, 202(7): 2131-40.
13. Sharma R, Rooke J, Kolmogorova D, Melanson B, Mallet JF, Matar C, **Schwarz JM**, and Ismail N. (2018) Sex differences in the peripheral and central immune responses following lipopolysaccharide treatment in pubertal and adult CD-1 mice. *International Journal of Developmental Neuroscience*; Dec;71: 94-104.
14. Osborne BF, Turano A, Caulfield JI, and **Schwarz JM**. (2018) Sex- and region-specific differences in microglia phenotype and characterization of the peripheral immune response following early-life infection in neonatal male and female rats. *Neuroscience Letters*; Oct 24;692: 1-9.
15. Osborne BF, Turano A, and **Schwarz JM**. Sex Differences in the Neuroimmune System. (2018) *Current Opinion in Behavioral Sciences*; Oct; 23: 118-23.
16. Turano A, Osborne BF, and **Schwarz JM**. (2018) Sexual Differentiation and Sex Differences in Neural Development. *Current Topics in Behavioral Neuroscience*; Jul 3, doi: 10.1007/7854\_2018\_56. [Epub ahead of print].
17. Sherer ML, Posillico CK, and **Schwarz JM**. The Psychoneuroimmunology of Pregnancy. (2017) *Frontiers in Neuroendocrinology*; Oct 27, 51: 25-35.

18. Sherer ML, Posillico CK, and **Schwarz JM**. An examination of changes in maternal neuroimmune function during pregnancy and the postpartum period. (2017) *Brain, Behavior and Immunity*; 66: 201-9.
19. Turano A, Lawrence JH, and **Schwarz JM**. Activation of neonatal microglia can be influenced by other neural cells. (2017) *Neuroscience Letters*; 657: 32-37.
20. Osborne BF, Caulfield JI, Solomotis SA, **Schwarz JM**. Neonatal infection produces significant changes in immune function with no associated learning deficits in juvenile rats. (2017) *Developmental Neurobiology*; 77(10): 1221-36.
21. Terasaki LS and **Schwarz JM**. Impact of prenatal and subsequent adult alcohol exposure on pro-inflammatory cytokine expression in brain regions necessary for simple recognition memory. (2017) *Brain Sciences*; 7(10).
22. Terasaki LS and **Schwarz JM**. Effects of Moderate Prenatal Alcohol Exposure during Early Gestation in Rats on Inflammation across the Maternal-Fetal-Immune Interface and Later-Life Immune Function in the Offspring. (2016) *Journal of Neuroimmune Pharmacology*; 11(4): 680-92.
23. Brenhouse HC and **Schwarz JM**. Adolescence and the Immune System: Impact on Alcohol Use and Abuse. (2016) *Neurosci and Biobehav Rev*; S0149-7634(16)30105-1.
24. Tannenbaum C, **Schwarz JM**, Clayton JA, de Vries GJ, and Sullivan C. Evaluating sex as a biological variable in preclinical research: The devil is in the details. A commentary. (2016) *Biology of Sex Differences*; 7:13.
25. Terasaki LS, Gomez, J, and **Schwarz JM**. An Examination of Sex Differences in the Effects of Early-Life Opiate and Alcohol Exposure. (2016) *Philosophical Transactions B*; 371(1688): 20150123.
26. Posillico CK and **Schwarz JM**. An investigation into the effects of antenatal stress on the postpartum neuroimmune profile and depressive-like behaviors. (2016) *Behavioral Brain Research* Feb 1, 298 (Pt B): 218-28.
27. Posillico CK, Terasaki LS, Bilbo SD, **Schwarz JM**. Effects of Sex on Morphine-Induced Analgesia and Inflammatory Gene Expression along the Pain Pathway in Male and Female Sprague Dawley Rats. (2015) *Biology of Sex Differences* Dec 12;6: 33.
28. **Schwarz, JM**. Using Fluorescence Activated Cell Sorting to Examine Cell-Type Specific Gene Expression in Rat Brain Tissue. (2015) *JoVE* May 28; schwarz 99, doi: 10.3791/52537.
29. **Schwarz JM**, Smith SH, Bilbo SD. FACS analysis of neuronal-glia interactions in the nucleus accumbens following morphine administration. *Psychopharmacology* (2013) Dec; 230(4): 525-35.
30. **Schwarz JM** and Bilbo SD. Adolescent morphine exposure increases the risk of relapse to drug-seeking behavior in adulthood: critical role for long-term changes in glial function. *Journal of Neuroscience* (2013) Jan 16; 33(3):961-71.
31. Bilbo SD and **Schwarz JM**. The immune system and developmental programming of brain and behavior. *Front Neuroendocrinol.* (2012) Aug; 33(3): 267-86.
32. **Schwarz JM** and Bilbo SD. Sex, glia, and development: interactions in health and disease. *Horm Behav.* (2012) Aug;62(3):243-53
33. **Schwarz JM\***, Sholar PS\*, Bilbo SD. Sex differences in microglial colonization of the developing rat brain. *Journal of Neurochemistry* (2012) Mar; 120(6):948-63. \* Both authors contributed equally to this work.

34. **Schwarz JM**, Hutchinson MR, Bilbo SD. Early-Life Experience Decreases Potential Abuse Liability of Morphine in Adulthood via Microglial-Specific Epigenetic Programming of Anti-Inflammatory IL-10 Expression. *Journal of Neuroscience* (2011) 31(49):17835- 17847
35. Bilbo SD, Smith SH, **Schwarz JM**. A Lifespan Approach to Neuroinflammatory and Cognitive Disorders: A Critical Role for Glia. (Review) *J Neuroimmune Pharmacol.* (2011) Aug 6. PMID: 21822589.
36. **Schwarz JM** and Bilbo SD. LPS elicits a much larger and broader inflammatory response than *Escherichia coli* infection within the hippocampus of neonatal rats. *Neurosci. Lett.* (2011) Jun 22; 497(2): 110-5.
37. Nugent BM, **Schwarz JM**, McCarthy MM. Hormonally-mediated Epigenetic Changes to Steroid Receptors in the Developing Brain: Implications for Sexual Differentiation. (Review) *Hormones and Behavior.* (2011) Mar; 59(3): 338-44.
38. **Schwarz JM\***, Nugent BM\*, McCarthy MM. Developmental and Hormone-Induced Epigenetic Changes to Estrogen and Progesterone Receptor Genes in Brain Are Dynamic across the Life Span. *Endocrinology.* (2010) Oct; 151(10): 4871-8. \* Both authors contributed equally to this work.
39. Wright CL, **Schwarz JM**, Dean SL, McCarthy MM. Cellular mechanisms of estradiol mediated sexual differentiation of the brain. *Trends in Endocrinology and Metabolism.* (Review) (2010); (21) 553–561.
40. McCarthy MM, Auger AP, Bale TL, Devries G, Dunn G, Forger N, Murray E, Nugent B, **Schwarz JM**, and Wilson ME. The Epigenetics of Sex Differences in the Brain. *Journal of Neuroscience*, (Review). (2009); 29(41): 12815-23.
41. Bilbo SD and **Schwarz JM**. Early-Life Programming of Later-Life Brain and Behavior: A Critical Role for Innate Immunity. (Review) *Frontiers in Behavioral Neuroscience.* (2009); (3)14.
42. McCarthy MM, Wright CL, **Schwarz JM**. New Tricks by an Old Dogma: Mechanisms of the Organizational / Activational Hypothesis of Steroid-Mediated Sexual Differentiation of Brain and Behavior. (Review) *Hormones and Behavior.* (2009) May; 55(5):655-65.
43. **Schwarz JM** and McCarthy MM. The role of neonatal NMDA receptor activation in defeminization and masculinization of sex behavior in the rat. *Hormones and Behavior* (2008) Nov; 54(5): 662-8.
44. **Schwarz JM** and McCarthy MM. Steroid-induced sexual differentiation of the developing brain: Multiple pathways, one goal. (Review) *Journal of Neurochemistry.* (2008) Jun; 105(5): 1561-72.
45. McCarthy MM, **Schwarz JM**, Wright CL, Dean SL. Mechanisms mediating estradiol modulation of the developing brain. (Review) *Journal of Neuroendocrinology* (2008) Jun; 20(6): 777-83.
46. **Schwarz JM**, Liang SL, Thompson SM, McCarthy MM. Estradiol induces dendritic spines on developing hypothalamic neurons by enhancing glutamate release independent of transcription: A mechanism for an organizational sex difference, *Neuron* (2008) May 22; 58(4): 584-98.
47. **Schwarz JM** and McCarthy MM. Cellular mechanisms of estradiol-mediated masculinization of the brain. (Review); *Journal of Steroid Biochemistry and Molecular Biology* (2008) Apr 109; (3-5): 300-6.
48. Hadjimarkou MM, Benham R, **Schwarz JM**, Holder MK, Mong JA. Estradiol suppresses activation of putative sleep neurons in the ventrolateral preoptic area of the adult rat, *European Journal of Neuroscience* (2008) Apr; 27(7): 1780-92.
49. Todd BJ, **Schwarz JM**, Mong JA, and McCarthy MM. Glutamate AMPA/kainate receptors, not

GABAA receptors, mediate estradiol induced sex differences in hypothalamic dendritic spines, *Developmental Neurobiology*. (2007) Jan; 67(3):304-15.

50. Todd BJ, **Schwarz JM**, and McCarthy MM. Prostaglandin E2: A point of divergence in estradiol mediated sexual differentiation. *Hormones and Behavior*. (2005) Dec; 48(5): 512-21.
51. Numan M, Numan MJ, **Schwarz JM**, Neuner CM, Flood TF, and Smith CD. Medial preoptic area interactions with the nucleus accumbens – ventral pallidum circuit and maternal behavior in rats. *Behav. Brain Res*. (2005) Mar 7; 158(1): 53-68.

### **Books and Book Chapters (6 in total)**

- Schwarz JM** and McCarthy MM. (2020). Microglia, Hormones, and Behavior (tentative chapter title). Springer-Nature. Masterclass in Neuroendocrinology Series; Microglia, Hormones, and Behavior. JG Tasker (Ed.) Springer-Nature.
- Klein SL and **Schwarz JM**. (2018) Sex Differences in Neuroendocrine Regulation of Immune Responses. Oxford Research Encyclopedia of Neuroscience. RL Nelson (Ed.) Oxford University Press (Book Chapter, DOI:10.1093/acrefore/9780190264086.013.223).
- Turano A, Osborne BF, **Schwarz JM**. Sex Differences in Neural Development. Neuroendocrine Regulation of Behavior. (2018) Neuroendocrine Regulation of Behavior: *Current Topics in Behavioral Neurosciences*; Jul 3; Springer; doi: 10.1007/7854\_2018\_56.
- Schwarz JM**. (2015) Sex and the Developing Brain. *The Neuroscience of Sex* (Book Chapter) Elsevier.
- Schwarz JM** and Bilbo SD. (2014) Microglia and Neurodevelopment: Programming Cognition throughout the Lifespan. *The Handbook of Psychoneuroimmunology*. (Book Chapter) Wiley-Blackwell.
- Schwarz JM** and Bilbo SD. (2011) The Immune System and Brain Development. *The Developing Brain*. (Book) Morgan and Claypool.

### **Scientific Meeting Presentations (108 in total)**

1. Pluchino J, Della Valle R, **Schwarz JM**. Regional differences in various risk factors for postpartum depression: Applying mixed models to the PRAMS dataset. SfN Global Connectome, Jan 2021.
2. Habash N, Bielicki MB, Haas NA, **Schwarz JM**. Quantification of microglia in the dorsal hippocampus following temporary intra-hippocampal microglia depletion during development. SfN Global Connectome, Jan 2021.
3. Bielicki MB, **Schwarz JM**. Effects of juvenile immune challenge with lipopolysaccharide (LPS) on learning in context fear-conditioning paradigms. SfN Global Connectome, Jan 2021.
4. Muench MC, Turano A, **Schwarz JM**. Examining the impact of neuroimmune dysregulation on locomotive activity in male and female juvenile rats. SfN Global Connectome, Jan 2021.
5. McAuley EM, **Schwarz JM**. Examining the impact of neuroimmune dysregulation on social play behavior of male and female juvenile rats. SfN Global Connectome, Jan 2021.

NOTE: Many conference presentations for 2020 were cancelled due to COVID.

6. Bielicki MB, Haas NA, **Schwarz JM**. Intra-hippocampal depletion of microglia as a tool to examine the role of microglia in the ontogeny of learning and learning deficits produced by immune challenge. Delaware Center for Neuroscience Annual Symposium, 2019. \*\*Selected for an Oral Presentation!
7. Patel RT, Sherer ML, Haas NA, Parcels, MS, **Schwarz JM**. Impact of prenatal ZIKV infection on the development of hippocampal and cortical structures. Delaware Center for Neuroscience Annual Symposium, 2019.
8. Sherer ML, Patel R, Khanal P, Parcels MS, **Schwarz JM**. Rat Model of Prenatal Zika Virus Infection and Associated Neural and Behavioral Consequences in the Offspring. Delaware Center for Neuroscience Annual Symposium, 2019. Won 2<sup>nd</sup> place poster for graduate

students!

9. Turano A, McCauley, EM, Muench MC, Haas, NH, **Schwarz JM**. Examining the impact of a two-hit model of neuroinflammation on social behavior in male and female juvenile rats. Delaware Center for Neuroscience Annual Symposium, 2019. Won 3<sup>rd</sup> place poster for graduate students!
10. Della Valle, R and **Schwarz JM**. The Limited Bedding and Nesting Paradigm as a Naturalistic Model of Postpartum Depression. Society for Neuroscience, Chicago, IL, Oct 2019.
11. Bielicki MB, Haas NA, **Schwarz, JM**. Intra-hippocampal depletion of microglia as a tool to examine the role of microglia in the ontogeny of learning and learning deficits produced by immune challenge. Society for Neuroscience, Chicago, IL, Oct 2019.
12. Patel RT, Sherer ML, Haas NA, Parcels, MS, **Schwarz JM**. Impact of prenatal ZIKV infection on the development of hippocampal and cortical structures. Society for Neuroscience, Chicago, IL, Oct 2019.
13. Sherer ML, Patel R, Khanal P, Parcels MS, **Schwarz JM**. Rat Model of Prenatal Zika Virus Infection and Associated Neural and Behavioral Consequences in the Offspring. Society for Neuroscience, Chicago, IL, Oct 2019.
14. Turano A, McCauley, EM, Muench MC, Haas, NH, **Schwarz JM**. Examining the impact of a two-hit model of neuroinflammation on social behavior in male and female juvenile rats. Society for Neuroscience, Chicago, IL, Oct 2019.
15. Belgrave K, Bielicki MB, **Schwarz JM**. Depletion of Microglia in the Hippocampus using Liposome-Encapsulated Clodronate. Delaware State University Summer Research Symposium, 2019.
16. Sherer ML, Patel R, Khanal P, Parcels MS, **Schwarz JM**. Rat Model of Prenatal Zika Virus Infection. University of Delaware Graduate Student Research Forum 2019.
17. Turano A, McCauley, EM, Muench MC, Haas, NH, **Schwarz JM**. Examining the Impact of Neuroimmune Dysregulation on Social Behavior in Male and Female Juvenile Rats. University of Delaware Graduate Student Research Forum 2019.
18. Osborne BF and **Schwarz JM**. Sex Differences in Microglia-Neuron Communication Underlie Learning Deficits and Changes in Neuronal Morphology Following Early-life Immune Activation in Juvenile Rats. Psychoneuroimmunology Research Society Annual Meeting, Berlin, Germany, 2019.
19. Sherer ML, Patel R, Khanal P, Parcels MS, **Schwarz JM**. Rat Model of Prenatal Zika Virus Infection and Associated Neural and Behavioral Consequences in the Offspring. Psychoneuroimmunology Research Society Annual Meeting, Berlin, Germany, 2019.
20. Della Valle, R and **Schwarz JM**. The Limited Bedding and Nesting Paradigm as a Naturalistic Model of Postpartum Depression. Psychoneuroimmunology Research Society Annual Meeting, Berlin, Germany, 2019.
21. Bielicki MB, Haas NA, **Schwarz, JM**. Intra-hippocampal depletion of microglia as a tool to examine the role of microglia in the ontogeny of learning and learning deficits produced by immune challenge. Psychoneuroimmunology Research Society Annual Meeting, Berlin, Germany, 2019.
22. Haas NA, Gomez JL, **Schwarz JM**. An IL-6 Receptor Antagonist Effectively Attenuates Postpartum Anhedonia in The Female Rat but has no effect on Anhedonia Precipitated by Sub Chronic Stress. Organization for the Study of Sex Difference Annual Meeting, Washington, DC, 2019.
23. Osborne BF and **Schwarz JM**. Sex Differences in Microglia-Neuron Communication Underlie Learning Deficits and Changes in Neuronal Morphology Following Early-life Immune Activation in Juvenile Rats. Organization for the Study of Sex Difference Annual Meeting, Washington, DC, 2019. Selected for the Elizabeth Young New Investigator Symposium to give an Oral talk.
24. Sherer ML, Patel R, Khanal P, Parcels MS, **Schwarz JM**. Rat Model of Prenatal Zika Virus Infection and Associated Neural and Behavioral Consequences in the Offspring. Organization for the Study of Sex Difference Annual Meeting, Washington, DC, 2019.
25. Della Valle, R and **Schwarz JM**. The Limited Bedding and Nesting Paradigm as a Naturalistic Model of Postpartum Depression. Organization for the Study of Sex Difference Annual Meeting, Washington, DC, 2019.
26. Bielicki MB, Haas NA, **Schwarz, JM**. Intra-hippocampal depletion of microglia as a tool to examine the role of microglia in the ontogeny of learning and learning deficits produced by immune challenge. Organization for the Study of Sex Difference Annual Meeting, Washington, DC, 2019.



27. Eck, MA, Nowak CG, Osborne BF, **Schwarz JM**. Inflammatory gene expression in the spleen: a possible source of inflammation underlying learning deficits in juvenile rats? Delaware Center for Neuroscience Annual Symposium, 2018. \*\* Won poster prize for undergraduate poster
28. Nowak CG, Osborne BF, **Schwarz JM**. The effects of minocycline on lipopolysaccharide induced gene expression and learning deficits in the Context Preexposure Facilitation Effect Task Delaware Center for Neuroscience Annual Symposium, 2018. \*\*Won poster prize for research assistant
29. Osborne BF, **Schwarz JM**. Sex differences in microglia-neural signaling and learning following early-life immune activation in the juvenile rat Delaware Center for Neuroscience Annual Symposium, 2018.
30. Haas, NA, Gomez JL, **Schwarz JM**. An IL-6 receptor antagonist effectively attenuates postpartum anhedonia in the female rat, but has no effect on anhedonia precipitated by sub chronic stress. Delaware Center for Neuroscience Annual Symposium, 2018.
31. Sherer ML, Khanal P, Patel R, Parcells MS, **Schwarz JM**. A Rat Model of Maternal Zika Virus Infection and Associated Neural and Behavioral Consequences in the Offspring. Delaware Center for Neuroscience Annual Symposium, 2018.
32. Bielicki MB and **Schwarz JM**. Intra-hippocampal depletion of microglia as a tool to examine learning deficits produced by juvenile immune challenge. Delaware Center for Neuroscience Annual Symposium, 2018.
33. Turano A, Wood MS, Haas NA, **Schwarz JM**. Examining the impact of a two-hit model of neuroinflammation on social behavior in male and female juvenile rats. Delaware Center for Neuroscience Annual Symposium, 2018. \*\* Won poster prize for graduate student!!
34. Osborne BF, **Schwarz JM**. Sex differences in microglia-neural signaling and learning following early-life immune activation in the juvenile rat. Society for Neuroscience, San Diego, CA, 2018.
35. Haas, NA, Gomez JL, **Schwarz JM**. An IL-6 receptor antagonist effectively attenuates postpartum anhedonia in the female rat, but has no effect on anhedonia precipitated by sub chronic stress. Society for Neuroscience, San Diego, CA, 2018.
36. Sherer ML, Khanal P, Patel R, Parcells MS, **Schwarz JM**. A Rat Model of Maternal Zika Virus Infection and Associated Neural and Behavioral Consequences in the Offspring. Society for Neuroscience, San Diego, CA, 2018. \*\* Won *SfN* Trainee Professional Development Award!
37. Turano A, Wood MS, Haas NA, **Schwarz JM**. Examining the impact of a two-hit model of neuroinflammation on social behavior in male and female juvenile rats. Society for Neuroscience, San Diego, CA, 2018.
38. Wood MS, Turano A, Haas NA, **Schwarz JM**. Examining the impact of a two-hit model of neuroinflammation on social behavior in male and female juvenile rats. Summer Scholars UD Research Symposium, 2018.
39. Turano A, Haas NA, **Schwarz JM**. Examining the impact of a two-hit model of neuroinflammation on social behavior in juvenile rats. Society for Behavioral Neuroendocrinology and International Congress of Neuroendocrinology Joint Annual Meeting, Montreal, QC, Canada, 2018.
40. Gomez JL, Haas NA, **Schwarz JM**. An investigation into the impact of neuroimmune function after pregnancy or stress: Are there potential links to the onset of depression? Psychoneuroimmunology Research Society Annual Meeting, Miami, FL, 2018.
41. Sherer ML, Parcells MS, Gomez JL, **Schwarz JM**. Rat Model of Prenatal Zika Virus Infection. Psychoneuroimmunology Research Society Annual Meeting, Miami, FL, 2018.
42. Osborne BF, Solomotis SA, **Schwarz JM**. Sex differences in the consequences of early-life immune activation microglia-neural signaling and the ontogeny of hippocampal-dependent learning in the juvenile rat. Psychoneuroimmunology Research Society Annual Meeting, Miami, FL, 2018.
43. Osborne BF, Solomotis SA, **Schwarz JM**. Sex differences in the consequences of early-life immune activation on the ontogeny of hippocampal-dependent learning and microglia-neural signaling in the juvenile rat brain. Organization for the Study of Sex Differences Annual Meeting, Atlanta, GA, 2018.
44. Turano A, Wood MS, Haas NA, **Schwarz JM**. Examining the impact of a two-hit model of neuroinflammation on social behavior in male and female juvenile rats. Society for Neuroscience Annual Meeting, San Diego, CA, 2018

45. Sherer ML, Khanal P, Parcels MS, **Schwarz JM**. An Investigation into the Long-Term Impact of Prenatal Zika Virus Infection on the Developing Brain using a Rat Model of Maternal Infection with Associated Vertical Transmission. Society for Neuroscience Annual Meeting, San Diego, CA. 2018
46. Osborne BF and **Schwarz JM**. Sex differences in microglia-neural signaling and learning following early-life immune activation in the juvenile rat. Society for Neuroscience Annual Meeting, San Diego, CA. 2018
47. Gomez J, Haas NA, **Schwarz JM**. An IL-6 receptor antagonist effectively attenuates postpartum anhedonia in the female rat, but has no effect on anhedonia precipitated by sub chronic stress. Society for Neuroscience Annual Meeting, San Diego, CA. 2018
48. Sherer ML, Khanal P, Parcels MS, **Schwarz JM**. An Investigation into the Long-Term Impact of Prenatal Zika Virus Infection on the Developing Brain using a Rat Model of Maternal Infection with Associated Vertical Transmission. Psycnoneuroimmunology Research Society Annual Meeting, Miami, FL. 2018
49. Osborne BF, Beamish SB, **Schwarz JM**. Sex differences in the consequences of early- life immune activation on the ontogeny of hippocampal-dependent learning and microglia-neural signaling in the juvenile rat brain. Psycnoneuroimmunology Research Society Annual Meeting, Miami, FL. 2018
50. Gomez J, Haas NA, **Schwarz JM**. An investigation into the impact of neuroimmune function after pregnancy or stress: Are there potential links to the onset of depression? Psycnoneuroimmunology Research Society Annual Meeting, Miami, FL. 2018
51. Turano A, Haas NA, **Schwarz JM**. Examining the impact of a two-hit model of neuroinflammation on social behavior in juvenile rats. Society for Behavioral Neuroendocrinology Annual Meeting, Toronto, CA. 2018
52. Sherer ML, Khanal P, Parcels MS, **Schwarz JM**. An Investigation into the Long-Term Impact of Prenatal Zika Virus Infection on the Developing Brain using a Rat Model of Maternal Infection with Associated Vertical Transmission. Organization for the Study of Sex Differences Annual Meeting, Atlanta, GA. \*\* Travel Award Winner 2018
53. Osborne BF, Beamish SB, **Schwarz JM**. Sex differences in the consequences of early- life immune activation on the ontogeny of hippocampal-dependent learning and microglia-neural signaling in the juvenile rat brain. Organization for the Study of Sex Differences Annual Meeting, Atlanta, GA. 2018
54. Lawrence JH, Parcels MS, **Schwarz JM**. An Investigation into the Microglial Response to Neonatal ZIKV Infection. American Society for Biochemistry and Molecular Biology, San Diego, CA. \*\* Honorable Mention for Undergraduate Poster Presentation. 2018
55. Beamish SB, Osborne BF, **Schwarz JM**. The impact of early-life immune activation on changes in inflammatory cytokines. Delaware Center for Neuroscience Annual Symposium, 2017.
56. Lawrence JH, Turano A, Parcels MS, **Schwarz JM**. An investigation into the microglial response to neonatal ZIKV infection. Delaware Center for Neuroscience Annual Symposium, 2017.
57. Osborne BF, **Schwarz JM**. Immune activation produces learning deficits and alters microglia function in early juvenile development. Delaware Center for Neuroscience Annual Symposium, 2017.
58. Gomez JL, **Schwarz JM**. Examination into the Effects of a Second Pregnancy on Postpartum Anhedonia and Neuroimmune Function. Delaware Center for Neuroscience Annual Symposium, 2017.
59. Sherer ML, Parcels MS, Khanal P, **Schwarz JM**. Rat Model of Prenatal Zika Virus Infection. Delaware Center for Neuroscience Annual Symposium, 2017.
60. Turano A, Lawrence JH, **Schwarz JM**. Activation of Neonatal Microglia can be influenced by Other Neural Cells. Delaware Center for Neuroscience Annual

Symposium, 2017.

61. Lawrence JH, Turano A, Parcels MS, **Schwarz JM**. An investigation into the microglial response to neonatal ZIKV infection. Society for Neuroscience Annual Meeting, Washington, DC, 2017.
62. Osborne BF, **Schwarz JM**. Immune activation produces learning deficits and alters microglia function in early juvenile development. Society for Neuroscience Annual Meeting, Washington, DC, 2017.
63. Gomez JL, **Schwarz JM**. Examination into the Effects of a Second Pregnancy on Postpartum Anhedonia and Neuroimmune Function. Society for Neuroscience Annual Meeting, Washington, DC, 2017.
64. Sherer ML, Parcels MS, Khanal P, **Schwarz JM**. Rat Model of Prenatal Zika Virus Infection. Society for Neuroscience Annual Meeting, Washington, DC, 2017.
65. Turano A, Lawrence JH, **Schwarz JM**. Activation of Neonatal Microglia can be influenced by Other Neural Cells. Society for Neuroscience Annual Meeting, Washington, DC, 2017.
66. Khanal P, Sherer ML, Parcels MS, **Schwarz JM**. Impact of Prenatal Zika Virus Infection on the Developing Rat Brain. UMBC Undergraduate Research Symposium in the Chemical and Biological Sciences, 2017.
67. Khanal P, Sherer ML, Parcels MS, **Schwarz JM**. Impact of Prenatal Zika Virus Infection on the Developing Rat Brain. Summer Scholars UD Research Symposium, 2017.
68. Turano A, Lawrence JH, **Schwarz JM**. Sex differences in microglial activation in the developing rat brain. Psychoneuroimmunology Research Society Annual Meeting, Galveston, TX, 2017.
69. Gomez JL, **Schwarz JM**. Impact of Second Pregnancy on Postpartum Depressive Behaviors and Inflammation. Psychoneuroimmunology Research Society Annual Meeting, Galveston, TX, 2017.
70. Sherer ML, Parcels MS, Gomez JL, **Schwarz JM**. Rat Model of Prenatal Zika Virus Infection. Psychoneuroimmunology Research Society Annual Meeting, Galveston, TX, 2017.
71. Osborne BF, Solomotis SA, **Schwarz JM**. Neonatal infection produces sex-specific changes in neuroimmune function with no associated deficits in spatial learning in juvenile rats. Psychoneuroimmunology Research Society Annual Meeting, Galveston, TX, 2017.
72. Osborne BF, Solomotis SA, **Schwarz JM**. Neonatal infection produces sex-specific changes in neuroimmune function with no associated deficits in spatial learning in juvenile rats. Organization for the Study of Sex Differences Annual Meeting, Montreal, QC, Canada, 2017.
73. Lawrence JH, Turano, A, Schwarz JM. An Investigation of Sex Differences in Microglia Morphology and Function. ASBMB Annual Meeting 2017, Chicago, IL. 2017
74. Turano A, Lawrence JH, **Schwarz JM**. Sex differences in microglia number and activation in the developing rat brain. Delaware Center for Neuroscience Annual Symposium, 2016.
75. Osborne BF and **Schwarz JM**. Effect of neonatal immune activation on the developing immune system and learning in juveniles. Delaware Center for Neuroscience Annual Symposium, 2016.
76. Sherer ML and **Schwarz JM**. Investigating neuroimmune function throughout pregnancy and the postpartum period. Delaware Center for Neuroscience Annual Symposium, 2016.
77. Turano A, Lawrence JH, **Schwarz JM**. Sex differences in microglia number and activation in the developing rat brain. Society for Neuroscience Annual Meeting, San Diego, CA, 2016.
78. Osborne BF and **Schwarz JM**. Effect of neonatal immune activation on the developing immune system and learning in juveniles. Society for Neuroscience Annual Meeting, San Diego, CA, 2016.
79. Sherer ML and **Schwarz JM**. Investigating neuroimmune function throughout pregnancy and

- the postpartum period. Society for Neuroscience Annual Meeting, San Diego, CA, 2016.
80. Osborne BF and **Schwarz JM**. An investigation into the contribution of sex on the developing immune system and long-term learning deficits. Society for Behavioral Neuroendocrinology Annual Meeting, Montréal, QC, 2016.
  81. Turano A, Lawrence JH, **Schwarz JM**. Sex differences in microglia number and activation in the developing rat brain. Society for Behavioral Neuroendocrinology Annual Meeting, Montréal, QC, 2016.
  82. Sherer ML and **Schwarz JM**. Investigating the impact of immune activation on neuroimmune function during various time-points throughout pregnancy and the postpartum period. Society for Behavioral Neuroendocrinology Annual Meeting, Montréal, QC, 2016.
  83. Osborne BF and **Schwarz JM**. An investigation into the contribution of sex on the developing immune system and long-term learning deficits. Organization for the Study of Sex Differences Annual Meeting, Philadelphia, PA, 2016.
  84. Turano A, Lawrence JH, **Schwarz JM**. Sex differences in microglia number and activation in the developing rat brain. Organization for the Study of Sex Differences Annual Meeting, Philadelphia, PA, 2016.
  85. Sherer ML and **Schwarz JM**. Investigating the impact of immune activation on neuroimmune function during various time-points throughout pregnancy and the postpartum period. Organization for the Study of Sex Differences Annual Meeting, Philadelphia, PA, 2016.
  86. Osborne BF, Caulfield JI, **Schwarz JM**. Consequences of neonatal infection immune function and spatial learning in juvenile male and female rats. Society for Neuroscience Annual Meeting, Chicago, IL, 2015
  87. Posillico CK and **Schwarz JM**. Implications of stress and infection on neuroimmune function and behavior as potential risk factors for developing postpartum depression. Society for Neuroscience Annual Meeting, Chicago, IL, 2015.
  88. Terasaki LS and **Schwarz JM**. Moderate In Utero Alcohol Exposure Results in Sex-Dependent Inflammation in the Developing Rat Brain. Society for Neuroscience Annual Meeting, Chicago, IL, 2015.
  89. Osborne BF, Caulfield JI, **Schwarz JM**. Sex differences in neuroimmune response to neonatal infection in brain regions important for learning and memory: Implications for developmental disorders. PNIRS, Seattle, WA, 2015
  90. Terasaki LS, Blades A, **Schwarz JM**. Moderate *In Utero* Alcohol Exposure Results in Sex-Dependent Inflammation in the Developing Rat Brain. PNIRS, Seattle, WA, 2015.
  91. Posillico CK and **Schwarz JM**. Implications of stress and infection on neuroimmune function and behavioral as potential risk factors for developing postpartum depression. PNIRS, Seattle, WA, 2015.
  92. Posillico CK and **Schwarz JM**. Implications of stress and infection on neuroimmune function and behavioral as potential risk factors for developing postpartum depression. Society for Behavioral Neuroendocrinology, Monterey, CA, 2015.
  93. Osborne BF, Caulfield JI, **Schwarz JM**. Sex differences in neuroimmune response to neonatal infection in brain regions important for learning and memory: Implications for developmental disorders. Society for Behavioral Neuroendocrinology, Monterey, CA, 2015.
  94. Caulfield JI, Osborne BF, **Schwarz JM**. Sex differences in juvenile immune function and potential implications for developmental delays in learning. Society for Behavioral Neuroendocrinology, Monterey, CA, 2015.
  95. Caulfield JI, Terasaki LS, **Schwarz JM**. Sex differences in neonatal immune function and potential implications for developmental delays in learning. Society for Neuroscience Annual Meeting, Washington DC, 2014.
  96. Terasaki LS, Dimatteo RM, Blades A, **Schwarz JM**. Moderate in utero alcohol exposure

- results in sex-dependent inflammation in the developing rat brain. Society for Neuroscience Annual Meeting, Washington DC, 2014.
97. Posillico CK and **Schwarz JM**. An investigation into the impact of pregnancy and stress on neuroimmune function: Are there potential links to postpartum depression? Society for Neuroscience Annual Meeting, Washington DC, 2014.
  98. Dimatteo RM and **Schwarz JM**. Does moderate in utero alcohol exposure result in inflammation in the developing brain? PNIRS annual meeting, Philadelphia PA, 2014.
  99. Posillico CK and **Schwarz JM**. An investigation into the impact of pregnancy and stress on neuroimmune function and whether there is a link to postpartum depression. PNIRS annual meeting, Philadelphia PA, 2014.
  100. Dimatteo RM and **Schwarz JM**. Does moderate in utero alcohol exposure result in inflammation in the developing brain? OSSD Annual Meeting, Minneapolis, MN, 2014.
  101. Dimatteo RM and **Schwarz JM**. Does moderate in utero alcohol exposure result in inflammation in the developing brain? Delaware Center for Neuroscience Retreat, Dec 2013.
  102. **Schwarz JM**, Smith SH, Bilbo SD. Neuronal-Glial Interactions in the Nucleus Accumbens following Morphine Administration: A Role in Relapse Behavior. Society for Neuroscience Annual Meeting: New Orleans LA. 2012.
  103. **Schwarz JM** and Bilbo SD. Adolescent morphine exposure increases the risk of relapse to drug-seeking behavior in adulthood: potential role for long-term changes in glial function. Society for Neuroscience Annual Meeting; Washington DC, 2011.
  104. **Schwarz JM**, Sholar PS, and Bilbo SD. Sex differences in the colonization of microglia throughout brain development: potential implications for neuropsychiatric disorders. Organization for the Study of Sex Differences Annual Meeting; Oklahoma City, 2011
  105. Sholar PW, **Schwarz JM**, Bilbo SD. A developmental profile of microglial morphology and density within the brains of male and female rats. Society for Neuroscience Annual Meeting; San Diego 2010.
  106. **Schwarz JM**, Hutchinson MR, Bilbo SD. Understanding the Role of Stress in Morphine-Induced Reward and Relapse: A Novel Role for Glial Activation? Society for Neuroscience Annual Meeting; San Diego 2010.
  107. **Schwarz JM**, Hutchinson MR, Bilbo SD. Maternal care alters morphine effectiveness and underlying microglial activation in adulthood. Society for Neuroscience Annual Meeting; Chicago IL 2009.
  108. **Schwarz JM**. Role of epigenetics in the establishment and maintenance of sexually-differentiated traits. Society for Neuroscience Annual Meeting; Chicago IL 2009.
  109. **Schwarz JM**, Nugent BM, Tsuda MC, Watai K, Ogawa S, McCarthy MM. Establishment of Sex Differences in the Developing Rodent Brain: Is it ER alpha or ER beta? Organization for the Study of Sex Differences Annual Meeting, New Orleans 2008.
  110. **Schwarz JM**, Thompson SM, and McCarthy MM. A novel mechanism for establishing sex differences in the brain and behavior: estradiol-enhanced glutamate release. Society for Neuroscience Annual Meeting; San Diego CA 2007.
  111. **Schwarz JM** and McCarthy MM. Establishing sex differences in the developing male brain: A novel role for estradiol-enhanced glutamate release. Society for Behavioral Neuroendocrinology Annual Meeting; Monterrey CA 2007.
  112. **Schwarz JM** and McCarthy MM. Establishing sexually dimorphic dendritic patterning in the developing hypothalamus: A possible role for estradiol-enhanced glutamate release from presynaptic terminals. Society for Neuroscience Annual Meeting; Atlanta 2006.
  113. **Schwarz JM** and McCarthy MM. Sexually differentiating the developing hypothalamus: Glutamate and the rapid actions of estradiol. Society for Behavioral Neuroendocrinology Annual Meeting; Pittsburgh 2006.

### **Invited Seminars**

- **February 2, 2021** (online): “*Impact of early-life immune activation on long-term immune function and the ontogeny of learning*”, University of South Carolina, Department of Psychology
- **December 16<sup>th</sup>, 2020** (online): “*Impact of early-life immune activation on long-term immune function and the ontogeny of learning.*”, Neuroscience Seminar Series, University of Texas Medical Branch, Galveston, Texas.
- **October 9<sup>th</sup>, 2020** (online): “*Impact of early-life immune activation on long-term immune function and the ontogeny of learning in males and females*” University of Wisconsin, Madison Department of Pediatrics and Neuroscience
- **December 4<sup>th</sup>, 2019**: “*Impact of early-life immune activation on long-term immune function and the ontogeny of learning in males and females*” Institute for Behavioral Medicine Research’s Seminar Series at the Ohio State University Wexner Medical Center, Ohio.
- **November 7<sup>th</sup>, 2019**: “*Infectious Behavior: How our immune system affects our brain.*” Science Café, Newark DE.
- **September 26<sup>th</sup>, 2019**: “Immune activation and behavior across the lifespan”, Montreal QC Canada
- **April 15<sup>th</sup>, 2019**: “*Impact of early-life immune activation on long-term immune function and the ontogeny of learning in males and females*” Session Title: The neuroendocrinology of programmed rheostasis; British Society of Neuroscience Annual Conference 2019, Dublin Ireland.
- **April 11<sup>th</sup>, 2019**: “*Impact of Early-Life Immune Activation on Later-Life Brain and Behavior*”, Environmental and Molecular Mechanisms of Health and Disease seminar series, University of Texas, Austin.
- **September 13<sup>th</sup>, 2018**: “*Impact of Early-Life Immune Activation on Later-Life Brain and Behavior*”, St. Joseph University Neuroscience Brown Bag Series, Philadelphia, PA
- **January 16<sup>th</sup>, 2018**: “*Using a rat model of maternal ZIKV infection to examine the interaction of pregnancy and immune activation on maternal and fetal outcomes*” Winter Conference on Brain Research 2018, Whistler, British Columbia.
- **October 18<sup>th</sup>, 2017**: “*Impact of Early-Life Immune Activation on Later-Life Brain and Behavior*”, Temple University Neuroscience Seminar Series, Philadelphia, PA
- **June 13<sup>th</sup>, 2017**: Frank Beach Award Plenary Lecture, Society for Behavioral Neuroendocrinology Annual Meeting, Long Beach, CA
- **April 21<sup>st</sup>, 2017**: “*Impact of Early-Life Immune Activation on Later-Life Brain and Behavior*”, Virginia Commonwealth University, Anatomy and Neurobiology Seminar Series
- **March 10<sup>th</sup>, 2017**: “*Impact of Early-Life Immune Activation on Later-Life Brain and Behavior*”, Children’s Hospital of Philadelphia, Stress Neurobiology Seminar Series
- **October 13<sup>th</sup>, 2016**: “*Effects of Early-Life Immune Activation on Later-Life Brain and Behavior*”, University of Nebraska, Lincoln Perinatal Programming Seminar Series
- **October 3<sup>rd</sup>, 2016**: “*Effects of Early-Life Immune Activation on Later-Life Brain and Behavior*”, University of South Carolina, Department of Biology Seminar Series.
- **August 10<sup>th</sup>, 2016**: “*Impact of Pregnancy on Neuroimmune Function and Behavior*” Society for Behavioral Neuroendocrinology Annual Meeting, Montreal, QC, Canada
- **June 27<sup>th</sup>, 2016**: “*Investigating changes in neuroimmune function during pregnancy and the postpartum period: What is the impact on mom and baby?*” University of Pennsylvania BWIRCH Women’s health seminar series.
- **January 25, 2016**: “*How to Consider Sex as a Biological Variable during Development*” Winter Conference on Brain Research.
- **September, 20 2015**: “*Interactions of Sex and Neuroimmune Function and the Risk of Neurodevelopmental Disorders.*” International Congress of Gender Medicine, Berlin.
- **June 24, 2015**: “*Moderate In Utero Alcohol Exposure Results in Sex-Dependent. Inflammation in the Developing Rat Brain.*” Research Society on Alcoholism (RSOA),
- **May 13, 2015**: “*Effects of Early-Life Immune Activation on Later-Life Brain and Behavior*” Departmental Colloquium, Psychological and Brain Sciences, University of Delaware,

- **January 16, 2015:** “Sex-dependent microglial colonization and potential vulnerability to infection” University of Pennsylvania Center for Neurobiology and Behavior (CNB).
- **December 17, 2014:** “Impact of Early-Life Immune Activation on Later-Life Brain and Behavior”. University of Pennsylvania Department of Anesthesiology.
- **April 24, 2014:** Organization for the Study of Sex Differences Annual Meeting Workshop, Inflammation 101 “Inflammation and Mental Health.”
- **March 20, 2014:** UD Developmental Seminar speaker “Neonatal Handling as a Model of Maternal Care: part II.”
- **March 12, 2014:** UD Social Brown Bag speaker “The Bi-Directional Influence of Social Interaction and Immune Function”
- **October 18, 2013:** Vanderbilt’s Annual CONTE Symposium on Neurodevelopment “Has Antibody Seen my Baby”. “Sex Matters: The Neuroimmunology of Developmental Disorders and the Role of Sex.”
- **July 19, 2013:** UPenn Center for the Study of Sex and Gender Annual Symposium. “Sex Differences in Microglial Colonization of the Developing Brain: Implications for Health and Disease.”
- **July 3, 2013:** European School of Neuroimmunology (ESNI) “Neuroimmunology of developmental disorders”.
- **March 20, 2013:** UD Developmental Seminar speaker “Neonatal Handling as a Model of Maternal Care.”
- **February 21, 2013:** Delaware State University Neuroscience Seminar, “Developmental Programming of Microglial Function and its Role in Addiction.”
- **Organization for the Study of Sex Differences** Annual Meeting “Sex, glia, and development: interactions in health and disease.” June 2012
- **Psychoneuroimmunology Research Society (PNIRS)** Annual Meeting “Early-Life Experience Decreases Potential Abuse Liability of Morphine via Microglial-Specific Epigenetic Programming of Anti-Inflammatory IL-10 Expression”. Bloomingdale IL, June 2011.
- **Duke Institute of Brain Sciences – Addiction Research Group:** “Early- Life Programming of Morphine-Induced Reward: a critical role for glia.” January 2010.
- **Society for Neuroscience (SfN)** Annual Meeting, Mini-Symposium on Epigenetics of Sex Differences: “Role of Epigenetics in the Maintenance of Sexually Differentiated Neural Traits”. Chicago IL, October 2009.
- **Society for Behavioral Neuroendocrinology (SBN)** Annual Meeting, “Non-Genomic Effects of Estradiol on Sexual Differentiation of the Brain and Behavior.” East Lansing MI, June, 2009
- **World Health Organization,** Department of Reproductive Health and Research: Technical Consultation on Hormonal Contraceptive Use during lactation and Effects on the Neonate. “Effects of Estradiol on the Developing Brain” Geneva Switzerland, October 2008.
- **Steroid and Gene Expression (SAGE) meeting** “Effect of Estradiol on the Developing Mediobasal Hypothalamus” Breckenridge, CO, 2007.

## Mentoring / Supervision

### *Fall 2020 – Ongoing*

Elise Lemanski, Doctoral, Behavioral Neuroscience, University of Delaware, Mentor’s Role: **PhD advisor**  
 Gabi Dagher, UNIV401/402, Psychology, University of Delaware, Role: Senior Thesis 3<sup>rd</sup> Reader  
 Nate Fulham, UNIV401/402, Economics, University of Delaware, Role: Senior Thesis 3<sup>rd</sup> Reader  
 Taylor Hamill, UNIV401/402, Psychology, University of Delaware, Role: Senior Thesis 3<sup>rd</sup> Reader  
 Rachel Northrup, UNIV401/402, Psychology, University of Delaware, Role: Senior Thesis 3<sup>rd</sup> Reader  
 Eric Brengel, UNIV401/402, Neuroscience, University of Delaware, Role: Senior Thesis 3<sup>rd</sup> Reader

### *Summer 2020 – Ongoing*

Daria Willis, Undergraduate, Neuroscience, University of Delaware, Lab Advisor, NSCI368  
 Jenna Pluchino, Undergraduate, Neuroscience, University of Delaware, Lab Advisor, Summer Scholars

and BISC468

*Summer 2020 – Fall 2020*

Brennan Gallamoza, Undergraduate, Medical Laboratory Sciences, University of Delaware; Lab Advisor Summer Scholars.

*Spring 2019 – Ongoing*

Nicola Habash, Undergraduate, Neuroscience/Biology, Institution: University of Delaware, Description of Mentor's Role: Lab Advisor for BISC468, UNIV401/402 Senior Honors Thesis in Biology.

Megan Muench, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: Lab Advisor for NSCI368

*Winter 2019 – Fall 2020*

Rebecca Della Valle, Doctoral, Behavioral Neuroscience, Institutions: University of Delaware, Description of Mentor's Role: **PhD advisor**

*Fall 2018 – Ongoing*

Elizabeth McAuley, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: Lab Advisor NSCI368, 4+1 Master's in Neuroscience, **MS Thesis Advisor**.

Mary Beth Bielicki, Doctoral, Behavioral Neuroscience, Institution: University of Delaware, Description of Mentor's Role: **PhD advisor**

*Summer 2018 – Spring 2020*

Clarissa Nowak, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: Lab Advisor, research assistant

Rita Patel, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: Lab Advisor for BISC468, research assistant, 4+1 Master's in Neuroscience, **MS Thesis advisor**

*Spring 2018 – Spring 2021*

Mikaela Eck, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: Lab Advisor, NSCI368 for Fall 2018

*Spring 2018 – Fall 2018*

Veronica Defosse, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: Lab Advisor BISC468, then NSCI468 for Fall 2018

*Fall 2017 – Fall 2018*

McKayla Wood, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: Lab Advisor BISC468, then Summer Scholars Summer 2018

*Fall 2017 – Spring 2018*

Catherine Zimmerman, Undergraduate, MEDT, Institution: University of Delaware, Description of Mentor's Role: Lab Advisor BISC468

Julia Johansson, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: senior thesis committee member

Emma Spillman, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: senior thesis 3rd reader

Jesse McCann, Undergraduate, Psychology, Institution: University of Delaware, Description of Mentor's Role: senior thesis 3rd reader



Brianna Zamerowski, Undergraduate, Biology, Institution: University of Delaware, Description of Mentor's Role: DSU / NINDS Summer Scholar 2017

*Summer 2017 - Fall 2017*

Jonathan Jacobsen, Doctoral, Health and Medical Sciences, Institution: University of Adelaide, Description of Mentor's Role: PhD Committee Member

*Fall 2016 - Spring 2017*

Trisha Chakraborty, Doctoral, Behavioral Neuroscience, Institution: University of Delaware, Description of Mentor's Role: PhD Committee Member

Margaret Donahue, Graduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: senior thesis 3rd reader / 4+1 Master's thesis committee

Hannah Wastyk, Undergraduate, Biochemistry, Institution: University of Delaware, Description of Mentor's Role: senior thesis 3rd reader

Gabrielle Furman, Undergraduate, Biology, Institution: University of Delaware, Description of Mentor's Role: BISC468 advisor / lab advisor

Morgan Dukes, Undergraduate, Psychology, Institution: University of Delaware, Description of Mentor's Role: senior thesis 3rd reader

*Fall 2016 - Ongoing*

Julie Hoye, Doctoral, Clinical Psychology, Institution: University of Delaware, Description of Mentor's Role: PhD Committee Member

*Summer 2016 - Fall 2017*

Hallye Rosenbloom, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: Summer Scholars Advisor, attending PA school

*Summer 2016 – Spring 2018*

Sarah Beamish, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: Summer Scholars Advisor / NSCI368 advisor / **Thesis advisor UNIV401/402**, attending University of Wisconsin, Milwaukee for PhD in Neuroscience.

Pragyan Khanal, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: McNair Scholar Advisor / Summer Scholar Advisor Summer 2016 - Fall 2016

*Spring 2016 - Summer 2016*

Janae Caviness, Graduate, Biology, Institution: Delaware State University, Description of Mentor's Role: MS Thesis committee member

*Spring 2016 - 2018*

Jennifer Lawrence, Undergraduate, Biology / Neuroscience, Institution: University of Delaware, Description of Mentor's Role: Summer Scholars Advisor / BISC468 advisor / **Thesis advisor UNIV401/402**, Fulbright Scholar, attending Wash U in St. Louis for PhD in Neuroscience

*Fall 2015 - Spring 2016*

Taylor Medina, Undergraduate, Psychology, Institution: University of Delaware, Description of Mentor's

Role: Lab advisor for PSYC366

Jennifer Staib, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: senior thesis 3rd reader

Hollie Sanders, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: senior thesis 3rd reader

Lauren Webb, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: senior thesis 3rd reader

Sophia Pimpinelli, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: Lab advisor for PSYC366

Shaqran Shareeq, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: senior thesis 3rd reader

*Fall 2015 - Summer 2016*

Jaime White, Doctoral, Biology, Institution: Delaware State University, Description of Mentor's Role: PhD Committee Member

*Summer 2015 – Spring 2020*

Morgan Sherer, Doctoral, Behavioral Neuroscience, Institution: University of Delaware, Description of Mentor's Role: **PhD advisor**

Alexandra Turano, Graduate, Behavioral Neuroscience, Institution: University of Delaware, Description of Mentor's Role: **PhD advisor**

*Summer 2015 – Spring 2018*

Julie Gomez, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: McNair Scholar advisor / **M.S. Thesis advisor / 4+1 Master's student (2019)**, attending Thomas Jefferson University, Sidney Kimmel Medical College in Fall 2018

*Summer 2015 – Spring 2017*

Samantha Solomotis, Undergraduate, Psychology, Institution: University of Delaware, Description of Mentor's Role: Lab advisor for Summer Scholars, then ongoing research assistant

*Spring 2015 - Spring 2016*

Michael Ruggiero, Graduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: MS Thesis committee member

Jennifer Blaze, Doctoral, Behavioral Neuroscience, Institution: University of Delaware, Description of Mentor's Role: PhD Committee Member

Karen Boschen, Graduate, Behavioral Neuroscience, Institution: University of Delaware, Description of Mentor's Role: PhD Committee Member

*Summer 2014 - Ongoing*

Brittany Osborne, Doctoral, Behavioral Neuroscience, Institution: University of Delaware, Description of Mentor's Role: **PhD advisor**

*Summer 2013 - Spring 2016*

Laurne Terasaki, Undergraduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: **Thesis advisor UNIV401/402** - Halsey McPhee Award winner (Department of Psychological Brain Sciences Top Honor)

Caitlin Posillico, Graduate, Neuroscience, Institution: University of Delaware, Description of Mentor's Role: **M.S. Thesis Advisor / 4+1 Master's student**