

## CURRICULUM VITAE

**Catherine A. Christian**


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**EDUCATION**


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**Smith College** – Northampton, Massachusetts September 1997 – May 2001  
A.B. in Neuroscience and Italian Language & Literature  
Awarded *cum laude* with Highest Honors in Neuroscience  
Honors Research Advisor: Mary Harrington, Ph.D.  
Honors Thesis: *Interactions of Photic and Non-Photic Stimuli in Resetting Circadian Rhythms*

**Università Vita-Salute San Raffaele** – Milan, Italy October 2001 – July 2002  
Fulbright Fellow in Psychology/Neuroscience

**University of Virginia** – Charlottesville, Virginia August 2002 – November 2007  
Ph.D. in Neuroscience (conferred January 2008)  
Laboratory of Suzanne Moenter, Ph.D.  
Dissertation Committee: Douglas Bayliss, Ph.D.; Jaideep Kapur, M.D., Ph.D.; Michael Menaker, Ph.D.; Margaret Shupnik, Ph.D.  
Dissertation: *Diurnal and Estradiol-Dependent Regulation of the Neuroendocrine Signal for Ovulation*

**Cold Spring Harbor Laboratory** – Cold Spring Harbor, New York June 2005  
Ion Channel Physiology Course

**POSTDOCTORAL RESEARCH TRAINING**


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**University of Virginia** – Charlottesville, Virginia December 2007 – June 2008  
Research Associate in Medicine – Endocrinology and Metabolism  
Laboratory of Suzanne Moenter, Ph.D.

**Stanford University School of Medicine** – Stanford, California June 2008 – June 2014  
Postdoctoral Fellow in Neurology and Neurological Sciences  
Laboratory of John Huguenard, Ph.D.

**ACADEMIC FACULTY APPOINTMENTS**


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**University of Illinois at Urbana-Champaign** – Urbana, Illinois August 2014 - present  
Assistant Professor in Molecular and Integrative Physiology  
Assistant Professor in the University of Illinois College of Medicine at Urbana

*Affiliations:*

Beckman Institute for Advanced Science and Technology (2015-present)  
Neuroscience Program (2014-present)  
Program in Endocrinology, Embryology, and Reproduction (2014-present)

## HONORS AND AWARDS

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1998-2001	First Group Scholar (top 10% of class) and Dean's List, Smith College
1999	Howard Hughes Undergraduate Fellowship, Smith College/Univ. of Calif., Davis
2000-2001	Arnold and Mabel Beckman Foundation Science Scholarship, Smith College
2000	Phi Beta Kappa, Junior Member, Smith College
2001	Sigma Xi, Associate Member, Smith College
2001-2002	Fulbright Fellowship, U.S. Department of State
2005	First Prize, Huskey Graduate Research Exhibition, University of Virginia
2006	Endocrine Society Travel Award
2006	Outstanding Neuroscience Graduate Student Award, University of Virginia
2006	Michael J. Peach Outstanding Graduate Student Award, University of Virginia
2006	Society for Neuroscience Graduate Student Travel Award
2007	Award for Excellence in Scholarship in the Sciences & Engineering, Univ. of Virginia
2007	Women in Endocrinology Young Investigator Award
2007	Lalor Foundation Merit Award, Society for the Study of Reproduction
2008	Endocrine Scholars Award, The Endocrine Society
2009	University of Virginia nominee, CGS/UMI Distinguished Dissertation Award
2010	Katharine McCormick Travel Grant, Stanford University School of Medicine
2012	Society for Neuroscience Postdoctoral Fellow Travel Award
2013	Grass Foundation-American Epilepsy Society Young Investigator Travel Award
2016	List of Teachers Ranked as Excellent, University of Illinois at Urbana-Champaign
2017	Neuroscience Program nominee, Blavatnik Award for Young Scientists, UIUC

## RESEARCH SUPPORT

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### Current

**Whitehall Foundation** Three-Year Research Grant, "Astrocytic Modulation of Synaptic Inhibition."

March 15, 2016 - March 14, 2019

\$207,659 direct costs

Role: PI

**Brain Research Foundation** Fay/Frank Seed Grant, "Optoglia Modulation of Inhibition and Seizure Susceptibility."

June 1, 2016 - November 30, 2018

\$80,000 direct costs

Role: PI

**NIH R01 NS105825** "Neural and pituitary mechanisms linking epilepsy to co-morbid reproductive endocrine dysfunction."

April 1, 2018 - March 31, 2023

\$1,093,750 direct costs

Role: PI

**NIH R03 NS103029** "Lateralized targeting of hippocampus to model interactions between epilepsy and reproductive endocrine disorders."

July 15, 2018 - June 30, 2020

\$100,000 direct costs

Role: PI

## Previous

**NIH T32 GM008328** Institutional NIH Predoctoral Training Grant, "Predoctoral Training in Neuroscience." Appointed September 1, 2002 – August 31, 2003

**NIH F31 NS053253** Individual Predoctoral National Research Service Award, "Central Synaptic Mechanisms Regulating Ovulation." December 1, 2005 – November 30, 2007 (Role: PI)

**NIH T32 NS007280** Institutional NIH Postdoctoral Training Grant, "Epilepsy Training Program." Appointed June 24, 2008 – June 23, 2011

**Epilepsy Foundation of America** Postdoctoral Research Fellowship, "Dynamics of Glial and Neuronal Release of Endozepines in the Thalamus." July 1, 2011 – June 30, 2012 (Role: PI)

**Stanford University School of Medicine** Katharine McCormick Advanced Postdoctoral Fellowship, "Optical Stimulation of Astrocytic Endozepine Release in the Thalamus." October 1, 2012 – December 31, 2013 (Role: PI)

**Citizens United for Research in Epilepsy (CURE)** Taking Flight Award, "Modulation of GABAergic Transmission and Absence Seizures by Optical Stimulation of Astrocytes." January 1, 2014 – July 31, 2015. \$100K direct costs (Role: PI)

**Brain and Behavior Research Foundation** NARSAD Young Investigator Grant, "Endozepine/Benzodiazepine Interactions in Modulating Synaptic Inhibition and Cognition." January 15, 2016 – July 14, 2018. \$70K direct costs (Role: PI)

*Primary co-sponsorship* of **Beckman Institute Graduate Fellowship** for Jiang Li, August 16, 2016 – July 15, 2017 (co-sponsor: Dr. Mark Nelson) \$25K direct costs

*Primary co-sponsorship* of **Beckman Institute Postdoctoral Fellowship** for Dr. Courtney Sobieski, (co-sponsors: Dr. Stephen Boppart, Dr. Justin Rhodes, Dr. Parijat Sengupta) July 1, 2017 – June 30, 2020 (terminated Aug 2018 to accept new position outside UIUC) \$186K direct costs

## **INVITED PRESENTATIONS**

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- 2006 "Estradiol-induced shifts in GABA transmission are associated with the neuroendocrine signal for ovulation."  
Graduate Biosciences Symposium, University of Virginia
- 2007 "Synaptic mechanisms regulating the neuroendocrine signal for ovulation."  
Biological Sciences Colloquium, Smith College  
Neuroscience Graduate Program, University of Virginia
- 2007 "Synaptic regulation of the neuroendocrine signal for ovulation."  
Department of Neurobiology, Harvard Medical School  
Department of Neurology and Neurological Sciences, Stanford University  
Department of Neurobiology and Physiology, Northwestern University

- 2010 “Endozepines modulate thalamocortical circuitry and absence seizures.”  
Stanford Institute for Neuro-Innovation and Translational Neurosciences  
(SINTN) Research Conference, Stanford University School of Medicine
- 2013-2014 “The brain’s little helper: Antiepileptic actions of endozepines in the thalamus.”  
Department of Biological Sciences, Smith College  
Department of Neurobiology and Anatomical Sciences, University of Mississippi  
Medical Center  
Department of Biology, Boston University  
Department of Pharmacology, Perelman School of Medicine, University of  
Pennsylvania  
Department of Biology, University of Massachusetts, Amherst  
Department of Cellular and Physiological Sciences, University of British  
Columbia  
Department of Molecular and Integrative Physiology, University of Illinois at  
Urbana-Champaign  
Department of Anatomy and Neurobiology, University of California, Irvine  
Department of Biomedical Sciences, Colorado State University
- 2015 “Neural mechanisms of reproductive dysfunction with epilepsy.”  
Department of Molecular and Integrative Physiology, University of Illinois at  
Urbana-Champaign
- 2015 “Impacts of epilepsy on the hypothalamic control of reproduction.”  
Reproductive Biology Seminar Series, University of Illinois at Urbana-  
Champaign
- 2016 “Neural mechanisms of co-morbid reproductive dysfunction in epilepsy.”  
Neuroscience Program, University of Illinois at Urbana-Champaign  
Department of Neuroscience, University of Minnesota
- 2016 “Bidirectional Astrocytic Modulation of GABA<sub>A</sub>R-Mediated Synaptic Transmission.”  
6<sup>th</sup> Gordon Research Conference on Mechanisms of Epilepsy and Neuronal  
Synchronization, Girona, Spain
- 2016-2017 “Neural mechanisms of epilepsy-associated reproductive endocrine dysfunction”  
Department of Biology, Wabash College  
Department of Neuroscience, Tufts University School of Medicine
- 2017 “Impacts of epilepsy and seizures on estrous cyclicity and GnRH neuron firing activity.”  
Reproductive Biology Seminar Series, University of Illinois at Urbana-  
Champaign
- 2017 “Neural mechanisms linking epilepsy to co-morbid reproductive endocrine disorders.”  
“Synapse: A Collaborative Neuroscience Conference,” Carle Neuroscience  
Institute, Carle Hospital/Beckman Institute

- 2017 “Adverse impacts on the hypothalamic control of reproduction in a mouse model of temporal lobe epilepsy.”  
Scientific Symposium on “Sex and the Seizure,” 71<sup>st</sup> Annual Meeting of the American Epilepsy Society, Washington, D.C.
- 2018 “Hypothalamic mechanisms linking epilepsy to co-morbid reproductive endocrine disorders.”  
Department of Physiology, Feinberg School of Medicine, Northwestern University at Chicago

## PUBLICATIONS

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### *Original Research:*

1. **Christian CA**, Harrington ME 2002 Three days of novel wheel access diminishes light-induced phase delays *in vivo* with no effect on *Per1* induction by light. *Chronobiology International* 19:671-682.
2. **Christian CA**, Mobley JL, Moenter SM 2005 Diurnal and estradiol-dependent changes in gonadotropin-releasing hormone neuron firing activity. *Proceedings of the National Academy of Sciences of the United States of America* 102:15682-15687 (Track II/Direct Submission).
3. **Christian CA**, Moenter SM 2007 Estradiol induces diurnal shifts in GABA transmission to gonadotropin-releasing hormone neurons to provide a neural signal for ovulation. *The Journal of Neuroscience* 27:1913-1921.
4. **Christian CA**, Moenter SM 2008 Vasoactive intestinal polypeptide can excite gonadotropin-releasing hormone neurons in a manner dependent on estradiol and gated by time of day. *Endocrinology* 149:3130-3136.
5. **Christian CA\***, Glidewell-Kenney C\*, Jameson JL, Moenter SM 2008 Classical estrogen receptor  $\alpha$  signaling mediates negative and positive feedback on gonadotropin-releasing hormone neuron firing. *Endocrinology* 149:5328-5334. (\*equal contribution)
6. **Christian CA**, Moenter SM 2008 Critical roles for fast synaptic transmission in mediating estradiol negative and positive feedback in the neural control of ovulation. *Endocrinology* 149:5500-5508.
7. **Christian CA**, Pielecka-Fortuna J, Moenter SM 2009 Estradiol suppresses glutamatergic transmission to gonadotropin-releasing hormone neurons in a model of negative feedback in mice. *Biology of Reproduction* 80:1128-1135.
8. Paz JT, **Christian CA**, Parada I, Prince DA, Huguenard JR 2010 Focal cortical infarcts alter intrinsic excitability and synaptic excitation in the reticular thalamic nucleus. *The Journal of Neuroscience* 30:5465-5479.
9. **Christian CA**, Herbert AG, Holt RL, Peng K, Sherwood KD, Pangratz-Fuehrer S, Rudolph U, Huguenard JR 2013 Endogenous positive allosteric modulation of GABA<sub>A</sub> receptors by *Diazepam binding inhibitor*. *Neuron* 78:1063-1074. (co-corresponding author)

10. **Christian CA**, Huguenard JR 2013 Sniffer Patch Laser Uncaging REsponse (SPLURgE): an assay of regional differences in allosteric receptor modulation and neurotransmitter clearance. *Journal of Neurophysiology* 110:1722-1731.
11. **Christian CA**, Huguenard JR 2013 Astrocytes potentiate GABAergic transmission in the thalamic reticular nucleus via endozepine signaling. *Proceedings of the National Academy of Sciences of the United States of America* 110:20278-20283. (corresponding author)
12. Jewett KA, **Christian CA**, Bacos JT, Lee KY, Zhu J, Tsai NP 2016 Feedback modulation of neural network synchrony and seizure susceptibility by Mdm2-p53-Nedd4-2 signaling. *Molecular Brain* 9:32.
13. Li J, Kim JS, Abejuela VA, Lamano JB, Klein NJ, **Christian CA** 2017 Disrupted female estrous cyclicity in the intrahippocampal kainic acid mouse model of temporal lobe epilepsy. *Epilepsia Open* 2:39-47.
14. Makinson CD, Tanaka BS, Sorokin J, Wong J, **Christian CA**, Goldin AL, Escayg A, Huguenard JR 2017 Regulation of thalamic and cortical network synchrony by *Scn8a*. *Neuron* 93:1165-1179.
15. Ujjainwala AL, Courtney CD, Rhoads SG, Rhodes JS, **Christian CA** 2018 Genetic loss of diazepam binding inhibitor in mice impairs social interest. *Genes, Brain and Behavior* 17:e12442.
16. Courtney CD, **Christian CA** 2018 Subregion-specific impacts of genetic loss of diazepam binding inhibitor on synaptic inhibition in the murine hippocampus. *Neuroscience* 388:128-138.
17. Li J, Robare JA, Gao L, Ghane MA, Flaws JA, Nelson ME, **Christian CA** 2018 Dynamic and sex-specific changes in gonadotropin-releasing hormone neuron activity and excitability in a mouse model of temporal lobe epilepsy. *eNeuro* 5:e0273-18.2018

*Reviews and Commentaries:*

1. Moenter SM, Chu Z, **Christian CA** 2009 Neurobiological mechanisms underlying oestradiol negative and positive feedback regulation of gonadotrophin-releasing hormone neurones. *Journal of Neuroendocrinology* 21:327-333.
2. **Christian CA**, Moenter SM 2010 The neurobiology of preovulatory and estradiol-induced gonadotropin-releasing hormone surges. *Endocrine Reviews* 31:544-577. (corresponding author)
3. **Christian CA** 2016 Seizure Activity and Intervention Efficacy are Shaped by REMnants of Preceding Brain States. *Epilepsy Currents* 16:164-165.
4. **Christian CA** 2016 A Nose for Seizures: A Potential Role for Olfaction in the Co-Morbidity of Depression and Epilepsy? *Epilepsy Currents* 16:256-257.
5. **Christian CA** 2017 Mom Genes: A Role for Loss of Maternal *Ube3a* in GABAergic Neurons in Angelman Syndrome. *Epilepsy Currents* 17:237-238.

6. Sobieski C, **Christian CA** 2017 Developmental Inflammation Takes a Toll: Early Immune Responses Increase Seizure Susceptibility via Astrocytic TLR4 Signaling. *Epilepsy Currents* 17:370-371
7. **Christian CA** 2018 Persistent Protection Against Pathology and Paroxysms by P2X7R Antagonism. *Epilepsy Currents* 18:42-44.
8. **Christian CA** 2018 The Perils of Generalizing About GABA in Seizure Generalization. *Epilepsy Currents* 18:113-114.

*Book Chapters:*

1. **Christian CA** 2017 Neurophysiology of Gonadotropin-Releasing Hormone Neurons. Invited chapter in *Hormones, Brain and Behavior*, 3<sup>rd</sup> edition, Donald W. Pfaff and Marian Joëls, eds. Oxford: Academic Press. Vol. 3, pp. 379-400.

**ABSTRACTS**

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1. **Christian CA**, Mobley JL, Moenter SM 2005 Time-of-day and estradiol-dependent changes in GnRH neuron firing activity in a mouse model exhibiting daily LH surges. 87<sup>th</sup> Annual Meeting of the Endocrine Society, San Diego, CA.
2. **Christian CA**, Moenter SM 2005 Vasoactive intestinal polypeptide can excite GnRH neurons in an estradiol-dependent manner. 38<sup>th</sup> Annual Meeting of the Society for the Study of Reproduction, Québec City, Québec, Canada. (*selected for oral presentation*)
3. **Christian CA**, Moenter SM 2005 GABAergic signaling to GnRH neurons increases near LH surge onset. 35<sup>th</sup> Annual Meeting of the Society for Neuroscience, Washington, D.C.
4. **Christian CA**, Moenter SM 2006 Diurnal signals from multiple populations of GABAergic neurons are associated with induction and maintenance of the GnRH surge. 88<sup>th</sup> Annual Meeting of the Endocrine Society, Boston, MA. (*selected for oral presentation*)
5. **Christian CA**, Moenter SM 2006 GABAergic transmission to GnRH neurons increases in association with induction and maintenance of the GnRH surge. National Institute of Mental Health Predoctoral Research Festival, Bethesda, MD.
6. Moenter SM, **Christian CA** 2006 Mechanisms of the neuroendocrine signal for ovulation. 29<sup>th</sup> Annual Meeting of the Japan Neuroscience Society, Symposium on Neurobiology of Reproduction, Kyoto, Japan.
7. Moenter SM, **Christian CA**, Chu Z 2006 An electrophysiological approach to gathering data needed to model the gonadotropin-releasing hormone neural network. Society for Industrial and Applied Mathematics, Life Sciences Symposium on Modeling in Endocrinology, Raleigh, NC.
8. **Christian CA**, Moenter SM 2006 Estradiol increases activity of GABA afferents to GnRH neurons during the LH surge. 36<sup>th</sup> Annual Meeting of the Society for Neuroscience, Atlanta, GA.

9. **Christian CA**, Moenter SM 2007 Investigating sources of GnRH surge-associated increases in GABA transmission to GnRH neurons. 89<sup>th</sup> Annual Meeting of the Endocrine Society, Toronto, Ontario, Canada.
10. **Christian CA**, Moenter SM 2007 Differential synaptic mediation of estradiol negative and positive feedback effects on GnRH neuron firing activity. 40<sup>th</sup> Annual Meeting of the Society for the Study of Reproduction, San Antonio, TX. (*selected for oral presentation*)
11. **Christian CA**, Moenter SM 2007 Diurnal changes in NMDA and AMPA/KA receptor-mediated glutamate transmission to GnRH neurons are associated with the GnRH/LH surge. 37<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA.
12. **Christian CA**, Glidewell-Kenney C, Jameson JL, Moenter SM 2008 Estrogen response element (ERE)-dependent ER $\alpha$  signaling is required for estradiol negative and positive feedback effects on GnRH neuron firing activity. 90<sup>th</sup> Annual Meeting of the Endocrine Society, San Francisco, CA.
13. Moenter SM, **Christian CA** 2008 Interactions between circadian clocks and E<sub>2</sub> in generating negative and positive feedback regulation of GnRH neurons. Symposium on Clocks and Reproduction, Korean Endocrine Society, Seoul, South Korea.
14. **Christian CA**, Moenter SM 2008 Estradiol suppresses glutamatergic transmission to GnRH neurons during negative feedback. 38<sup>th</sup> Annual Meeting of the Society for Neuroscience, Washington, D.C.
15. Moenter SM, **Christian CA** 2008 Neurobiological mechanisms underlying estradiol negative and positive feedback regulation of GnRH neurons. United States/Japan Bilateral Symposium on Neurobiology of Steroid Hormone Receptors, Gifu, Japan.
16. **Christian CA**, Huguenard JR 2009 Nucleus-specific and age-dependent effects of benzodiazepine receptor blockade in the thalamus during early postnatal development. 39<sup>th</sup> Annual Meeting of the Society for Neuroscience, Chicago, IL.
17. **Christian CA**, Kozitza R, Peng K, Rudolph U, Huguenard JR 2010 Disruption of the GABA<sub>A</sub>R  $\alpha$ 3 subunit benzodiazepine binding site alters intra-thalamic inhibition and absence seizures. 3<sup>rd</sup> Gordon Research Conference on Mechanisms of Epilepsy and Neuronal Synchronization, Waterville, ME. (*selected for oral presentation*)
18. **Christian CA**, Rudolph U, Huguenard JR 2010 Effects of endozepines on synaptic integration in the thalamic reticular nucleus. 40<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA.
19. **Christian CA**, Rudolph U, Huguenard JR 2011 Glial cells are sources of endozepines in the thalamic reticular nucleus. 41<sup>st</sup> Annual Meeting of the Society for Neuroscience, Washington, D.C.



20. **Christian CA**, Huguenard JR 2011 Diazepam binding inhibitor-lacking *nm1054* mutant mice exhibit deficient endozepine signaling in the thalamic reticular nucleus. 65<sup>th</sup> Annual Meeting of the American Epilepsy Society, Baltimore, MD.
21. **Christian CA**, Herbert AG, Huguenard JR 2012 Diazepam binding inhibitor potentiates synaptic inhibition in the thalamic reticular nucleus and endogenously suppresses seizures. 4<sup>th</sup> Gordon Research Conference on Mechanisms of Epilepsy and Neuronal Synchronization, Waterville Valley, NH.
22. **Christian CA**, Huguenard JR 2012 Astrocytes modulate synaptic inhibition in the thalamic reticular nucleus via constitutive endozepine signaling mediated by diazepam binding inhibitor. 42<sup>nd</sup> Annual Meeting of the Society for Neuroscience, New Orleans, LA.
23. **Christian CA**, Foo LC, Barres BA, Huguenard JR 2013 Thalamic astrocytes potentiate GABA transmission. 6<sup>th</sup> Gordon Research Conference on Glial Biology: Functional Interactions among Glia and Neurons, Ventura, CA. (*selected for oral presentation*)
24. **Christian CA**, Huguenard JR 2013 Astrocytes potentiate GABAergic transmission in the thalamic reticular nucleus via endozepine signaling. 5<sup>th</sup> Gordon Research Conference on Inhibition in the CNS, Les Diablerets, Switzerland. (*selected for oral presentation*)
25. **Christian CA**, Huguenard JR 2013 Neurosteroidogenesis modulates thalamic activity via nucleus-specific effects on phasic and tonic inhibition. 43<sup>rd</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA.
26. **Christian CA**, Huguenard JR 2013 Diazepam binding inhibitor knockout mice display increased absence seizures and loss of thalamic endozepine signaling. 67<sup>th</sup> Annual Meeting of the American Epilepsy Society, Washington, D.C. (*selected for oral presentation*)
27. Makinson CD, Sorokin J, **Christian CA**, Huguenard JR 2015 Thalamic hyperexcitability in the *Scn8a* model of absence epilepsy. 45<sup>th</sup> Annual Meeting of the Society for Neuroscience, Chicago, IL.
28. Makinson CD, Sorokin J, Wong J, **Christian CA**, Goldin A, Escayg A, Huguenard JR 2016 Diametric regulation of thalamic and cortical network synchrony by *Scn8a* (*Nav1.6*). 6<sup>th</sup> Gordon Research Conference on Mechanisms of Epilepsy and Neuronal Synchronization, Girona, Spain
29. Li J, Abejuela VA, Kim JS, Lamano JB, Ghane MA, Reynish D, **Christian CA** 2016 Elevated gonadotropin-releasing hormone neuron firing activity in a female mouse model of temporal lobe epilepsy. 46<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA.
30. Courtney CD, **Christian CA** 2017 Divergent effects of loss of diazepam binding inhibitor signaling on synaptic inhibition in hippocampal CA1 and dentate gyrus. 47<sup>th</sup> Annual Meeting of the Society for Neuroscience, Washington, D.C.

31. Li J, Robare J, Ghane MA, Nelson ME, **Christian CA** 2017 Estrous cycle stage-dependent and sex-specific alterations of GnRH neuron firing activity in a mouse model of temporal lobe epilepsy. 47<sup>th</sup> Annual Meeting of the Society for Neuroscience, Washington, D.C.
32. Sobieski C, Wojnowski NM, Ramakrishnan C, DeFazio RA, Deisseroth K, **Christian CA** 2018 Optogenetic stimulation of astrocytic G<sub>q</sub> signaling differentially alters synaptic transmission in hippocampal CA1 and layer V of sensorimotor cortex. 48<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA.
33. Li J, Robare J, Gao L, Ghane MA, Flaws JA, Nelson ME, **Christian CA** 2018 Ovarian-cycle-linked and sex-specific changes in GnRH neuron firing and excitability in a mouse model of temporal lobe epilepsy. 7<sup>th</sup> Gordon Research Conference on Mechanisms of Epilepsy and Neuronal Synchronization, West Dover, VT.
34. Li J, Robare J, Gao L, Ghane MA, Flaws JA, Nelson ME, **Christian CA** 2018 Ovarian-cycle-linked and sex-specific changes in GnRH neuron firing and excitability in a mouse model of temporal lobe epilepsy. 72<sup>nd</sup> Annual Meeting of the American Epilepsy Society, New Orleans, LA.