

CURRICULUM VITAE

Alexa H. Veenema, PhD

Associate Professor in Behavioral Neuroscience
Director of the Neurobiology of Social Behavior Laboratory
Department of Psychology
Michigan State University
East Lansing, MI
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Lab website:

<https://veenemalab.psy.msu.edu>

MSU Psychology Department:

<https://psychology.msu.edu/people/faculty/aveenema>

MSU Neuroscience Program:

<https://neuroscience.natsci.msu.edu/about-us/directory/faculty/alexa-h-veenema-phd/>

RESEARCH INTERESTS

Social behavior, vasopressin, oxytocin, opioids, orexins, lateral septum, bed nucleus of the stria terminalis, ventral tegmental area, social behavior neural network, juveniles, sex differences, age differences, early life stress

EMPLOYMENT/EDUCATION

- | | |
|----------------------------------|---|
| 2017-present | Associate Professor in Behavioral Neuroscience
Department of Psychology & Neuroscience Program
Michigan State University, East Lansing, MI |
| 2016-2017 | Associate Professor in Behavioral Neuroscience
Department of Psychology, Boston College, Chestnut Hill, MA |
| 2010-2016 | Assistant Professor in Behavioral Neuroscience
Department of Psychology, Boston College, Chestnut Hill, MA |
| 2009-2010 | Post-doctoral researcher , advisor Dr. Geert J. de Vries
Department of Psychology & Center for Neuroendocrine Studies
University of Massachusetts, Amherst, MA |
| 2003-2009 | Post-doctoral researcher , advisor Dr. Inga D. Neumann
Department of Behavioural Neuroendocrinology, University of Regensburg, Germany |
| 2003
-June 23 rd - | Ph.D. in Neuroscience , advisors Dr. E. Ronald de Kloet and Dr. Jaap M. Koolhaas
Department of Animal Physiology, University of Groningen, the Netherlands
Thesis (ISBN 90-9017020-0): 'Coping style and stressor susceptibility: neuroendocrine and neurobiological studies with genetically selected mouse lines'
http://www.rug.nl/research/portal/files/43758862/thesis.pdf |
| 1997 | M.Sc. in Biology , area of expertise: Neuroscience
University of Groningen, the Netherlands |
-

PEER-REVIEWED PUBLICATIONS

(N = 59, Google Scholar Citations = 4438, H-index = 36, I10-index = 49)

<https://scholar.google.com/citations?user=fYcP6ykAAAAJ&hl=en>

Member of Dr. Veenema's lab: **1**=graduate student, **2**=undergraduate student, **3**=postdoc

- 2018 Bredewold R, Nascimento NF, Ro GS², Cieslewski SE², Reppucci CJ³, Veenema AH. Involvement of dopamine, but not norepinephrine, in the sex-specific regulation of juvenile socially rewarding behavior by vasopressin. *Neuropsychopharmacology*, May 22. [Epub ahead of print]
- Bredewold R, Veenema AH. Sex differences in the regulation of social and anxiety-related behaviors: Insights from vasopressin and oxytocin brain systems. *Curr Opin Neurobiol*, 49:132-140. Cited by 3
- Reppucci CJ³, Gergely CK², Veenema AH. Activation patterns of vasopressinergic and oxytocinergic brain regions following social play exposure in juvenile male and female rats. *J Neuroendocrinol*, Feb 9. [Epub ahead of print] Cited by 1
- Smith CJW¹, Wilkins KB², Li S², Tulimieri M², Veenema AH. Nucleus accumbens mu opioid receptors regulate context-specific social preferences in the juvenile rat. *Psychoneuroendocrinology*, 89: 59-68.
- Smith CJW¹, Ratnaseelan AM², Veenema AH. Robust age, but limited sex, differences in mu-opioid receptors in the rat brain: Relevance for reward and drug seeking behaviors in juveniles. *Brain Struct Funct*, 223:475-488. Cited by 2
- 2017 Raam T, McAvoy KM, Besnard A, Veenema A, Sahay A. Hippocampal oxytocin receptors are necessary for discrimination of social stimuli. *Nat Commun*. 2017 Dec 8;8(1):2001. Cited by 11
- Hodges TE, Baumbach JL, Marcolin ML, Bredewold R, Veenema AH, McCormick CM. Social instability stress in adolescent male rats reduces social interaction and social recognition performance and increases oxytocin receptor binding. *Neuroscience*, 359:172-182. Cited by 5
- Smith CJW¹, Mogavero JN², Tulimieri MT², Veenema AH. Involvement of the oxytocin system in the nucleus accumbens in the regulation of juvenile social novelty-seeking behavior. *Horm Behav*, 93:94-98. Cited by 6
- Dumais KM¹, Kulkarni PP, Ferris CF, Veenema AH. Sex differences in neural activation following different routes of oxytocin administration in awake adult rats. *Psychoneuroendocrinology*, 81:52-62. Cited by 5
- DiBenedictis BT³, Nussbaum M², Cheung HK², Veenema AH. Quantitative mapping reveals age and sex differences in vasopressin, but not oxytocin, immunoreactivity in the rat social behavior neural network. *J Comp Neurol*, 525:2549-2570. Cited by 13
- Varian BJ, Poutahidis T, DiBenedictis BT³, Levkovich T, Ibrahim Y, Didyk E, Shikhman L, Cheung HK², Hardas A, Ricciardi CE, Kolandaivelu K, Veenema AH, Alm EJ, Erdman SE. Microbial lysate upregulates host oxytocin. *Brain Behav Immun*, 61:36-49. Cited by 11
- Smith CJW¹, Poehlmann M, Li S², Bredewold R, Veenema AH. Age and sex differences in oxytocin and vasopressin V1a receptors in the rat brain: focus on the social-decision making network. *Brain Struct Funct*, 222:981-1006. Cited by 30
- 2016 Dumais KM¹, Alonso AG², Bredewold R, Veenema AH. Role of the oxytocin system in amygdala subregions in the regulation of social interest in male and female rats. *Neuroscience*, 330:138-149. Cited by 15

- Dumais KM¹, Veenema AH. Presence and absence of sex differences in structure and function of the brain oxytocin system: Implications for understanding social behavior. In: *Sex Differences in the Central Nervous System*, Academic Press, R. Shansky & J. Johnson (Eds), p. 247-295. Cited by 6
- Dumais KM¹, Alonso AG², Immormino MA², Bredewold R, Veenema AH. Involvement of the oxytocin system in the bed nucleus of the stria terminalis in the sex-specific regulation of social recognition. *Psychoneuroendocrinology*, 64:79-88. Cited by 25
- Dumais KM¹, Veenema AH. Vasopressin and oxytocin receptor systems in the brain: sex differences and sex-specific regulation of social behavior. *Front Neuroendocrinol*, 40:1-23. **Cited by 129**
- 2015 Ferris CF, Yee J, Kenkel W, Dumais KM¹, Moore K, Veenema AH, Kulkarni P, Perkybile A, Carter CS. Distinct BOLD activation profiles following central and peripheral oxytocin administration in awake rats. *Frontiers in Behavioral Neuroscience*, Sept 17;9:245. Cited by 24
- Bredewold R, Schiavo JK², Van der Hart M, Verreij M², Veenema AH. Dynamic changes in extracellular release of GABA and glutamate in the lateral septum during social play behavior in juvenile rats: Implications for sex-specific regulation of social play behavior. *Neuroscience*, 307:117-127. Cited by 16
- Smith CJW¹, Wilkins KB², Mogavero JN², Veenema AH. Social novelty investigation in the juvenile rat: Modulation by the opioid system. *J Neuroendocrinol*, 27:752-764. Cited by 14
- 2014 Bredewold R, Smith CJ¹, Dumais KM¹, Veenema AH. Sex-specific modulation of juvenile social play behavior by vasopressin and oxytocin depends on social context. *Front Behav Neurosci*, June 16;8:216. **Cited by 65**
- 2013 Dumais KM¹, Mayer TE², Bredewold R, Veenema AH. Sex differences in oxytocin receptor binding in forebrain regions: correlations with social interest in brain region- and sex- specific ways. *Horm Behav*, 64:693-701. **Cited by 78**
- Veenema AH, Bredewold R, De Vries GJ. Sex-specific modulation of juvenile social play by vasopressin. *Psychoneuroendocrinology*, 38:2554-2561. **Cited by 64**
- Lukas M, Toth I, Veenema AH, Neumann ID. Oxytocin mediates rodent social memory within the lateral septum and the medial amygdala depending on the relevance of the social stimulus: Male juvenile versus female adult conspecifics. *Psychoneuroendocrinology* 38:916-26. **Cited by 88**
- 2012 Taylor PV, Veenema AH, Paul MJ, Bredewold R, Isaacs S, de Vries GJ. Sexually dimorphic effects of a prenatal immune challenge on social play and vasopressin expression in juvenile rats. *Biol Sex Differ* Jun 14;3(1):15. **Cited by 42**
- Beiderbeck DI, Reber SO, Havasi A, Bredewold R, Veenema AH, Neumann ID. High and abnormal forms of aggression in rats with extremes in trait anxiety – Involvement of the dopamine system in the nucleus accumbens. *Psychoneuroendocrinology* 37: 1969-80. **Cited by 74**
- De Vries GJ, Veenema AH, Brown CH. Vasopressin and oxytocin: keys to understanding the neural control of physiology and behaviour. *J Neuroendocrinol* 24:527. Cited by 6
- Veenema AH. Toward understanding how early-life social experiences alter oxytocin- and vasopressin-regulated social behaviors. *Horm Behav* 61:304-312. **Cited by 118**
- Veenema AH, Bredewold R, De Vries GJ. Vasopressin regulates social recognition in juvenile and adult rats of both sexes, but in sex- and age-specific ways. *Horm Behav* 61:50-6. **Cited by 55**

- 2011 Lukas M, Toth I, Reber SO, Slattery DA, Veenema AH, Neumann ID. The neuropeptide oxytocin facilitates pro-social behavior and prevents social avoidance in rats and mice. *Neuropsychopharmacology*, 36:2159-68. **Cited by 233**
- Lukas M, Bredewold R, Landgraf R, Neumann ID, Veenema AH. Early life stress impairs social recognition due to a blunted response of vasopressin release within the septum of adult male rats. *Psychoneuroendocrinology*, 36:843-53. **Cited by 73**
- 2010 Veenema AH, Beiderbeck DI, Lukas M, Neumann ID. Distinct correlations of vasopressin release within the lateral septum and the bed nucleus of the stria terminalis with the display of intermale aggression. *Horm Behav*, 58:273-281. **Cited by 111**
- Neumann ID, Veenema AH, Beiderbeck DI. Aggression and anxiety: social context and neurobiological links. *Front Behav Neurosci*, Mar 30:4-12. Review. **Cited by 171**
- Lukas M, Bredewold R, Neumann ID, Veenema AH. Maternal separation interferes with developmental changes in brain vasopressin and oxytocin receptor binding in male rats. *Neuropharmacology*, 58:78-87. **Cited by 107**
- 2009 Veenema AH. Early life stress, the development of aggression and neurobiological correlates: What can we learn from animal models? *Front Neuroendocrinol*, 30:497–518. Review. **Cited by 209**
- Veenema AH, Neumann ID. Maternal separation enhances offensive play-fighting in juvenile male rats. *Psychoneuroendocrinology*, 23:463-467. **Cited by 131**
- 2008 Veenema AH, Neumann ID. Central vasopressin and oxytocin release: regulation of complex social behaviours. *Prog Brain Res*, 170:261-276. Review. **Cited by 239**
- Veenema AH, Reber SO, Selch S, Obermeier F, Neumann ID. Early life stress enhances the vulnerability to chronic psychosocial stress and experimental colitis in adult mice. *Endocrinology*, 149:2727-2736. **Cited by 99**
- Reber SO, Obermeier F, Straub HR, Veenema AH, Neumann ID. Aggravation of DSS-induced colitis after chronic subordinate colony (CSC) housing is partially mediated by adrenal mechanisms. *Stress*, 11:225-234. **Cited by 45**
- 2007 Beiderbeck DI, Neumann ID, Veenema AH. Differences in intermale aggression are accompanied by opposite vasopressin release patterns within the septum in rats bred for high and low anxiety. *Eur J Neurosci*, 26:3597-3605. **Cited by 109**
- Veenema AH, Neumann ID. Neurobiological mechanisms of aggression and stress coping: a comparative study in mouse and rat selection lines. *Brain Behav Evol*, 70:274-285. Review. **Cited by 137**
- Veenema AH, de Kloet ER, de Wilde MC, Roelofs AJ, Kawata M, Buwalda B, Neumann ID, Koolhaas JM, Lucassen PJ. Differential effects of stress on adult hippocampal cell proliferation in low and high aggressive mice. *J Neuroendocrinol*, 19:489-498. Cited by 26
- Veenema AH, Bredewold R, Neumann ID. Opposite effects of maternal separation on intermale and maternal aggression in C57Bl/6 mice: link to hypothalamic vasopressin and oxytocin immunoreactivity. *Psychoneuroendocrinology*, 32:437-50. **Cited by 158**
- Reber SO, Birkeneder L, Veenema AH, Obermeier F, Falk W, Straub RH, Neumann ID. Adrenal insufficiency and colonic inflammation following a novel chronic psycho-social stress paradigm in mice: implications and mechanisms. *Endocrinology*, 148:670-82. **Cited by 156**

- Veenema AH, Torner L, Blume A, Beiderbeck DI, Neumann ID. Low inborn anxiety correlates with high intermale aggression: Link to ACTH response and neuronal activation of the hypothalamic paraventricular nucleus. *Horm Behav*, 51:11-19. **Cited by 93**
- 2006 Veenema AH, Blume A, Niederle D, Buwalda B, Neumann ID. Effects of early life stress on adult male aggression and hypothalamic vasopressin and serotonin. *Eur J Neurosci*, 24:1711-20. **Cited by 224**
- Feldker DE, Morsink MC, Veenema AH, Datson NA, Proutski V, Lathouwers D, de Kloet ER, Vreugdenhil E. The effect of chronic exposure to highly aggressive mice on hippocampal gene expression of non-aggressive subordinates. *Brain Res*, 1089:10-20. Cited by 32
- Neumann ID, Torner L, Toschi N, Veenema AH. Oxytocin actions within the supraoptic and paraventricular nuclei: differential effects on peripheral and intranuclear vasopressin release. *Am J Physiol Regul Integr Comp Physiol*, 291:R29-36. **Cited by 36**
- 2005 Veenema AH, Sijtsma B, Koolhaas JM, De Kloet ER. The stress response to sensory contact in mice: genotype effect of the stimulus animal. *Psychoneuroendocrinology*, 30:550-557. **Cited by 36**
- Veenema AH, Cremers TIFH, Jongsma M, Steenbergen P, De Boer SF, De Kloet ER, Koolhaas JM. Differences in the effects of 5-HT_{1a} receptor agonists on forced swimming behavior and 5-HT metabolism between low and high aggressive mice. *Psychopharmacology*, 178:151-160. **Cited by 58**
- Buwalda B, Kole MHP, Veenema AH, Huininga M, De Boer SF, Korte SM, Koolhaas JM. Long-term effects of social stress on brain and behavior: a focus on hippocampal functioning. *Neurosci Biobehav Rev*, 29:83-97. Review. **Cited by 277**
- 2004 Veenema AH, Koolhaas JM, De Kloet ER. Basal and stress-induced differences in HPA axis, 5-HT responsiveness and hippocampal cell proliferation in two mouse lines. *Ann N Y Acad Sci*, 1018: 255-265. Review. **Cited by 89**
- 2003 Feldker DEM, Datson NA, Veenema AH, Proutski V, Lathouwers D, De Kloet ER, Vreugdenhil E. GeneChip analysis of hippocampal gene expression profiles of short- and long-attack-latency mice: technical and biological implications. *J Neuroscience Res*, 74:701-716. Cited by 29
- Sluyter F, Arseneault L, Moffitt TE, Veenema AH, de Boer SF, Koolhaas JM. Towards an animal model for antisocial behavior: parallels between mice and men. *Behav Genet*, 33:563-574. Review. **Cited by 57**
- Veenema AH, Meijer OC, De Kloet ER, Koolhaas JM. Genetic selection for coping style predicts stressor susceptibility. *J Neuroendocrinol*, 15:256-267. **Cited by 180**
- Veenema AH, Meijer OC, De Kloet ER, Koolhaas JM, Bohus BG. Differences in basal and stress-induced HPA regulation of wild house mice selected for high and low aggression. *Horm Behav*, 43:197-204. **Cited by 198**
- Feldker DE, Datson NA, Veenema AH, Meulmeester E, De Kloet ER, Vreugdenhil E. Serial analysis of gene expression predicts structural differences in hippocampus of long attack latency and short attack latency mice. *Eur J Neurosci*, 17:379-387. **Cited by 55**
- 2002 Van Riel E, Meijer OC, Veenema AH, Joëls M. Hippocampal serotonin responses in short and long attack latency mice. *J Neuroendocrinol*, 14:234-239. **Cited by 42**
- 2000 Abraham I, Harkany T, Horvath KM, Veenema AH, Penke B, Nyakas C, Luiten PG. Chronic corticosterone administration dose-dependently modulates Abeta(1-42)- and NMDA-induced neurodegeneration in rat magnocellular nucleus basalis. *J Neuroendocrinol*, 12:486-94. **Cited by 92**

1997 Abraham I, Veenema AH, Nyakas C, Harkany T, Bohus BG, Luiten PG. Effect of corticosterone and adrenalectomy on NMDA-induced cholinergic cell death in rat magnocellular nucleus basalis. *J Neuroendocrinol*, 9:713-720. Cited by 25

EXTRAMURAL FUNDING

Current Funding

NIMH R01MH102456 'Sex-specific regulation of social play'

Role: **PI**. Funding period: 09/14 – 07/19. Total costs: \$1,744,920

NSF IOS 1253386 'Vasopressin-mediated regulation of juvenile social behaviors'

Role: **PI**. Funding period: 09/13 – 09/18. Total costs: \$874,462

Completed Funding

NIMH R15MH102807 'Sex and age differences in the regulation of social recognition'

Role: **PI**. Funding period: 01/14 – 01/17. Total costs: \$469,500

The Brain and Behavior Research Foundation, NARSAD Young Investigator Grant supporting Dr. Sindy Cole, 'Elucidating the role of the prefrontal cortex in cue-induced overeating: Neuronal ensembles and orexin signaling'. Role: **Co-sponsor**. Funding period: 01/15 – 01/17. Total costs: \$60,000

NIMH F31MH100891, NRSA predoctoral research fellowship supporting Kelly M. Dumais

Role: **Faculty Sponsor**. Funding period: 10/13 – 10/15. Total costs: \$72,108

NSF GRFP 2012138127, graduate research fellowship supporting Caroline J. Smith

Role: **Faculty Sponsor**. Funding period: 09/12 – 09/15. Total costs: \$129,000

The Brain and Behavior Research Foundation, NARSAD Young Investigator Award 17382 'Neuropeptide regulation of juvenile social behaviors'

Role: **PI**. Funding period: 07/11 – 07/14. Direct and total costs: \$59,100

German Research Foundation, International Postdoctoral Research Fellowship

Role: **PI**. Funding period: 03/09 – 03/11, declined by PI after 07/10

Bavarian Research Foundation, Postdoctoral Research Fellowship

Role: **PI**. Funding period: 09/04 – 09/05

Bavarian Research Foundation, Postdoctoral Research Fellowship

Role: **PI**. Funding period: 08/03 – 08/04

INTRAMURAL FUNDING

Michigan State University - Provost Undergraduate Research Initiative (each \$2000, total \$4000)

Role: **PI**. Funding period: fall 2017/spring 2018 (1 undergrad), summer 2018 (1 undergrad). Supporting: Ashley Chambers '19

Boston College - Research Incentive Grant (each \$15,000, total \$30,000)

Role: **PI**. Funding period: 2011-2012, 2014-2015

Boston College - Research Expense Grant (each \$2,000, total \$12,000)

Role: **PI**. Funding period: summer/fall 2011, 2012, 2013, 2015; winter/spring 2011/2012; winter/spring 2013/2014

Boston College - Undergraduate Research Fellowship (total \$44,200)

Role: **PI**. Funding period: summer 2011 (1 undergrad), fall 2011 (1 undergrad), summer 2012 (4 undergrads), summer 2013 (7 undergrads), spring 2014 (1 undergrad), summer 2014 (8 undergrads), summer 2015 (8 undergrads), summer 2016 (6 undergrads). Supporting **24 students**: Thomas Mayer '12, Evangelina Barnard '13, Gabriela Hidalgo '13, Jazmin Mogavero '13, Danielle Scaramella '13, Andrea Alonso ('14, Marisa Immormino '14, Kayla Reardon '14, Jennifer Schiavo '14, Kevin Wilkins '14, Christine Wu '14, Sterling Karakula '15, Laura Newman '15, Aarane Ratnaseelan '16, Sara Li '16, Grace Ro '16, Daniel Cho '16, Elizabeth Nussbaum '16, Harry Cheung '17, Cassandra Gergely '17, Tessa Gillespie '17, Jing Ting Yuan '17, Shannon Cieslewski '18, Maxwell Tulimieri '18

AWARDS AND HONORS

- 2013 NSF Career Award
- 2013 Faculty Research Fellowship Boston College
- 2011 NARSAD Young Investigator Award
- 2010 Elizabeth Young New Investigator Award (from the Organization for the Study of Sex Differences)

AWARDS AND HONORS VEENEMA LAB MEMBERS

Member of Dr. Veenema's lab: **1**=graduate student, **2**=undergraduate student, **3**=postdoc

- 2018 **Provost Undergraduate Research Initiative Award** to Ashley Chambers¹
- 2017 **Provost Undergraduate Research Initiative Award** to Ashley Chambers¹
First place in talk competition of the Michigan Regional Postdoctoral Symposium by Dr. Christina Reppucci³
Glenn I. Hatton Memorial Fellowship to Dr. Christina Reppucci³ to attend and give a talk at the World Conference on Neurohypophysial Hormones
American Physiology Society Travel Award to Dr. Justin Smith³ to attend the World Conference on Neurohypophysial Hormones
- 2016 **Boston College Donald and Helene White Dissertation Award** to Kelly Dumais²
Scholar of the College Student, Daniel Cho¹
- 2015 **Boston College GSAS Dissertation Fellowship**, Kelly Dumais², to provide a stipend for one year
Boston College Advanced Study Grant, Grace Ro¹
Scholar of the College Student, Laura Newman¹
- 2014 **Boston College Engelhard Pingree Research Fellowship**, Kelly Dumais², given to a graduate student deemed to have made the greatest contribution to the research mission of the Graduate School of Arts & Sciences at Boston College
Travel Award, Kelly Dumais², to attend the *Biannual Meeting of the FENS Forum of Neuroscience*, Milan, Italy
Travel Award, Caroline Smith², to attend the *Biannual Meeting of the FENS Forum of Neuroscience*, Milan, Italy
Scholar of the College Student, Jennifer Schiavo¹
- 2012 **Poster Award**, Kelly Dumais², *Annual Symposium of the Center for Neuroendocrine Studies*, Amherst, MA
Travel Award, Remco Bredewold, to attend the *Annual Meeting of the Society for Social Neuroscience*, New Orleans, LA
- 2011 **Travel award**, Kelly Dumais², to attend the *Workshop on the Biology of Pro-Social Behavior*, Emory University, Atlanta

Travel Award, Caroline Smith², to attend the *Workshop on the Biology of Pro-Social Behavior*, Emory University, Atlanta, GA

DIRECTION OF RESEARCH

Direction of postdoctoral research

09/2018-present Katie E. Yoest
 09/2015-present Christina J. Reppucci
 09/2016-09/2017 Justin A. Smith
 09/2014-09/2016 Brett T. DiBenedictis (current: Lecturer, Boston University)

Direction of Ph.D. research

2018-present Jessica Lee
 2017-present Sang Yun (Henry) Yang
 2011-2017 Caroline J. Smith (current: Postdoc, Harvard Medical School)
 2010-2016 Kelly M. Dumais (current: Postdoc, McLean Hospital)

Direction of M.A./M.S. research

2013-2016 Nicholas Worley (current PhD student, Boston College)
 2014-2015 Michelle Verreij (visiting scholar, University of Groningen, the Netherlands)

Direction of Undergraduate Research at MSU (since 2017)

Senior Thesis: Ashley Chambers '19

NIH ENDURE diversity summer undergrad research: Natasha Mendez (2018)

Volunteer Research Assistant: Ashley Chambers '19, Suhanna Posana '19, Ann Marie Scazzero '20, Leigha Brown '20

Direction of Undergraduate Research at Boston College (2010-2016)

Boston College Scholar of the College Thesis (3 students): Jennifer Schiavo '14, Laura Newman '15, Daniel Cho '16

Senior Thesis (14 students): Thomas Mayer '12, Jazmin Mogavero '13, Andrea Alonso '14, Marisa Immormino '14, Kevin Wilkins '14, Christine Wu '14, Aarane Ratnaseelan '16, Sara Li '16, Grace Ro '16, Elizabeth Nussbaum '16, Harry Cheung '17, Cassandra Gergely '17, Tessa Gillespie '17, Jing Ting Yuan '17

Independent Study (19 students): Thomas Mayer '12, Jazmin Mogavero '13, Kayla Reardon '14, Danielle Scaramella '13, Andrea Alonso '14, Marisa Immormino '14, Jennifer Schiavo '14, Kevin Wilkins '14, Christine Wu '14, Sterling Karakula '15, Laura Newman '15, Aarane Ratnaseelan '16, Daniel Cho '16, Sara Li '16, Grace Ro '16, Harry Cheung '17, Cassandra Gergely '17, Jing Ting Yuan '17, Shannon Cieslewski '18

THESIS COMMITTEES

Doctoral Dissertation Committee

2019 **Sarah Kark**, PhD defense, Department of Psychology, BC (co-advisor)
 2018-present **Jessica Lee**, Department of Psychology, MSU (advisor)
 2017-present **Sang Yun (Henry) Yang**, Department of Psychology, MSU (advisor)
 Amanda White, Department of Psychiatry, University of Michigan (member)
 Erika Vitale, Department of Psychology, MSU (member)
 Lauren Raycraft, Department of Psychology, MSU (member)
 2017 **Caroline Smith**, PhD defense, Department of Psychology, BC (advisor)

- 2016 Thesis: Development of oxytocin, vasopressin V1a, and mu-opioid receptor expression in the rat brain: implications for the regulation of juvenile social novelty-seeking behavior
Kelly A. Bennion, PhD defense, Department of Psychology, BC (third member)
Kelly M. Dumais, PhD defense, Department of Psychology, BC (advisor)
- 2015 Thesis: Involvement of the oxytocin system in sex-specific regulation of social behavior and in sex-specific brain activation
Christina Reppucci, PhD defense, Department of Psychology, BC (co-advisor)
Elizabeth N. Holly, PhD defense, Sackler School of Graduate Biomedical Sciences, Tufts University (external member)
Callum Hicks, PhD defense, School of Psychology, University of Sydney, Australia (thesis examiner)
- 2014 **Joshua J. Meidenbauer**, PhD defense, Department of Biology, BC (third member)
- Master's Thesis Committee**
- 2016 **Morgan Rogers**, Master's defense, Department of Psychology, BC (co-advisor)
Nicholas Worley, Master's defense, Department of Psychology, BC (advisor)
 Thesis: Mechanisms underlying sex differences in the oxytocin system
Allison Foilb, Master's defense, Department of Psychology, BC (co-advisor)
Brittany Jeye, Master's defense, Department of Psychology, BC (third member)
- 2015 **Sarah Kark**, Master's defense, Department of Psychology, BC (co-advisor)
- 2014 **Sara E. Keefer**, Master's defense, Department of Psychology, BC (co-advisor)
Lauren C. Anderson, Master's defense, Department of Psychology, BC (co-advisor)
- 2013 **Caroline J. Smith**, Master's defense, Department of Psychology, BC (advisor)
 Thesis: Neural modulation of social novelty-seeking behavior in the juvenile rat
Kelly A. Bennion, Master's defense, Department of Psychology, BC (co-advisor)
- 2012 **Kelly M. Dumais**, Master's defense, Department of Psychology, BC (advisor)
 Thesis: Sex hormone and oxytocin regulation of male and female social interest and recognition: Oxytocin receptor densities correlate with social interest
Joshua J. Meidenbauer, Master's defense, Department of Biology, BC (third member)
- 2011 **Jaclyn Portelli**, Master's defense, Department of Psychology, BC (co-advisor)

MENTORING RESEARCH (Prior to Faculty Position)

Co-mentoring Ph.D. Research (co-mentored with Dr. Inga D. Neumann)

- 2007-2011 **Michael Lukas**, University of Regensburg, thesis defense: Oct 21, 2011
 Thesis: Effects of central neuropeptides on social preference and social recognition in male rats
- 2005-2009 **Daniela I. Beiderbeck**, University of Regensburg, thesis defense: May 4, 2009
 Thesis: 'Underlying neurobiological mechanisms of high and abnormal aggression in male rats: link to trait anxiety'

Mentoring Undergraduate Research

- 2009-2010 Senior honors research thesis, UMass-Amherst, Chido Kativhu
- 2007-2008 Bachelor thesis (6-month full-time), Univ. of Regensburg, Sophie Koszinowski
- 2003-2008 Research thesis (9-month full-time), University of Regensburg
 Daniela Niederle, Sandra Selch, Daniela Beiderbeck, Elisabeth Martin,
 Michael Lukas, Teresa Dintenfelder, Iulia Toth
- 1998-2003 Research thesis (6-month full-time), University of Groningen
 Erwin Buist, Evelijn Gerstel, Trynke de Jong, Simon Grootendijk,
 Betty Sijtsma, Anke Roelofs

INVITED TALKS

- 2019 'Function of sex differences in the brain for behavior: Insights from vasopressin and oxytocin', *University of Illinois, Urbana-Champaign, IL*
- 2018 'Developmental and sex-specific involvement of vasopressin in the regulation of social behavior', *International Symposium on Regulatory Peptides, Acapulco, Mexico, Sep 22-25*
- 'Function of sex differences in the brain for behavior: Insights from vasopressin and oxytocin', *Michigan State University, East Lansing, MI*
- 'Function of sex differences in the brain for behavior: Insights from vasopressin and oxytocin', *University of Michigan, Ann Arbor, MI*
- 2017 'Role of opioids and oxytocin in social behavior', *Oslo University Hospital, Oslo, Norway*
- 'Function of sex differences in the brain for behavior: Insights from vasopressin and oxytocin', *Rosalind Franklin University of Medicine and Science, North Chicago, IL*
- 'Vasopressin involved in preventing and inducing sex differences in behavior: A tale of two brain regions', *Society for Neuroscience, Washington DC*
- 'Dual function of sex differences in the brain vasopressin system: preventing and inducing sex differences in social behavior', *World Congress on Neurohypophysial Hormones, Mangaratiba, Rio de Janeiro, Brazil*
- 'Role of opioid and vasopressin systems in socially rewarding behaviors', *International Behavioral Neuroscience Society, Hiroshima, Japan*
- 'Role of opioid and vasopressin systems in juvenile socially rewarding behaviors', *Michigan State University, East Lansing, MI*
- 2016 'Role of opioid and vasopressin systems in socially rewarding juvenile behaviors', *University of Massachusetts, Amherst, MA*
- 'Sex differences in the brain prevent sex differences in social behavior', *Society for Social Neuroscience, San Diego, CA*
- 'Implications of sex differences in the oxytocin system for the regulation of social behavior', *University Medical Center Utrecht, Utrecht, the Netherlands*
- 'Role of opioid and vasopressin systems in socially rewarding juvenile behaviors', *FENS Forum of Neuroscience, Copenhagen, Denmark*
- 'Implications of sex differences in the oxytocin system for the regulation of social behavior', *Massachusetts General Hospital, Department of Psychiatry, Boston, MA*
- 2015 'Implications of sex differences in the oxytocin system for the regulation of social behavior', *Massachusetts General Hospital, Neuroendocrine Unit, Boston, MA*
- 'Plasticity in neuropeptide regulation of juvenile social behavior: Sex and social context matter', *Society for Behavioral Neuroendocrinology, Pacific Grove, CA*
- 'Sex-specific regulation of social play behavior by vasopressin and oxytocin in juvenile rats', *Eastern Psychological Association, Philadelphia, PA*
- 'Sex-specific regulation of social behavior by vasopressin and oxytocin', *Winter Conference on Brain Research, Big Sky, MT*

- 2014 'Age- and sex-specific regulation of social behavior by vasopressin and oxytocin', *University of Massachusetts*, Amherst, MA
- 'Implications of sex differences in the oxytocin system for the regulation of social behavior', *International Society of Psychoneuroendocrinology*, Montreal, Canada
- 'Mechanisms underlying sex-specific regulation of juvenile social play by vasopressin', *International Society of Psychoneuroendocrinology*, Montreal, Canada
- 'Age- and sex-specific regulation of social behavior by vasopressin and oxytocin', *Eastern Psychological Association*, Boston, MA
- 'Sex-specific regulation of social behavior by vasopressin and oxytocin', *Annual Social Brain Sciences Symposium*, Chestnut Hill, MA
- 2013 'Regulation of social behavior by vasopressin and oxytocin: Effects of early life stress, sex, and age', *Harvard University*, Cambridge, MA
- 'Sex-specific effects of oxytocin on social information processing in rats', *European Brain and Behaviour Society Meeting*, Munich, Germany
- 'Key roles for vasopressin and oxytocin in the sex-specific regulation of juvenile social behaviors', *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Atlanta, GA
- 'Sex-specific expression and regulation of social behavior: Involvement of vasopressin and oxytocin systems', *University of California*, Davis, CA
- 'The oxytocin system and social behavior: Effects of sex, age, and early life stress', *68th Annual Meeting of the Society for Biological Psychiatry*, San Francisco, CA
- 'Vasopressin and oxytocin as mediators of stress and social behavior', *University of Groningen*, the Netherlands
- 'Vasopressin and oxytocin as mediators of stress and social behavior', *McLean Hospital*, Belmont, MA
- 'Effects of early life stress on social behaviors: Link to alterations in oxytocin and vasopressin brain systems', *Maine Medical Center*, Portland, ME
- 'Effects of early-life social experiences on vasopressin- and oxytocin-mediated social and emotional behaviors', *Social Neuroendocrinology Pre-conference*, New Orleans, LA
- 2012 'Vasopressin and oxytocin as mediators of stress and social behavior', *Massachusetts General Hospital*, Boston, MA
- 'Quality of the early life social environment determines differential expression of juvenile and adult social behaviors: Link to vasopressin and oxytocin systems', *University of Chicago*, Chicago, IL
- 'Quality of the early life social environment determines differential expression of juvenile and adult aggressive behaviors: Link to vasopressin and oxytocin systems', *Bi-Bi-Annual World Meeting of the International Society for Research on Aggression*, Luxembourg
- 'Effects of early-life social experiences on vasopressin- and oxytocin-mediated social and emotional behaviors', *Annual Meeting of the International Behavioural and Neural Genetics Society*, Boulder, CO
- 2011 'Vasopressin and oxytocin as mediators of social behavior', *Cornell University*, Ithaca, NY
- 'Early life stress: Impact on social, brain, and immune function', *Children's Hospital Boston*, MA

- 'Early life stress alters vasopressin-regulated social behaviors', *Dutch Endo-Neuro-Psycho Annual Meeting*, the Netherlands
- 2010 'Early life stress: Impact on social, brain, and immune function', *Biology Department, Boston College*
- 'Early life stress: Impact on social, brain, and immune function', *Bowdoin College*, Brunswick, ME
- 'Early life stress affects the development of vasopressin-regulated social behavior', *Annual Meeting of the American College of Neuropsychopharmacology*, Miami Beach, FL
- 'Age- and brain region-specific effects of vasopressin on aggression and social recognition', *Bi-Annual World Meeting of the International Society for Research on Aggression*, Storrs, CT
- 'Key role for the neuropeptide vasopressin in sex-specific regulation of juvenile social behavior', *Annual Meeting of the Organization for the Study of Sex Differences*, Ann Arbor, MI
- 2009 'Early life stress: Impact on social, brain, and immune function', *University of Connecticut*, Storrs, CT
- 'Does vasopressin regulate intermale aggression? In vivo vasopressin release during resident-intruder encounters gives new insights', *NIMH*, Bethesda, MD
- 'Does vasopressin regulate intermale aggression? Intracerebral vasopressin release during resident-intruder encounters gives new insights', *Neuropeptide Satellite Meeting*, Chicago, IL
- 'Early life stress and the development of aggression and social recognition: a link to vasopressin', *Context, Causes, and Consequences of Conflict Workshop*, Leiden, The Netherlands
- 'Effects of early life stress on the development of aggression and social recognition: Link to alterations in central vasopressin activity', *European Society for Child and Adolescent Psychiatry meeting*, Budapest, Hungary
- 'Impact of early life stress and genetic factors on the regulation of social behaviors' *University of Massachusetts*, Amherst, MA
- 2008 'Impact of early life stress and genetic factors on the regulation of social behaviors', *Boston College*, Chestnut Hill, MA
- 'Long-term effects of early life stress on aggression and cognition associated with changes in central vasopressin activity', *12th Annual Meeting of the Society for Behavioral Neuroendocrinology*, Groningen, The Netherlands
- 2007 'Modulation of aggression and social cognition by early life stress and neuropeptides', *University of Wisconsin*, Madison, WI
- 'Modulation of aggression and social cognition by early life stress and neuropeptides', *University of Massachusetts*, Amherst, MA
- 'Early life stress increases male aggression and impairs social cognition: Link to alterations in brain vasopressin activity', *7th World Congress on Neurohypophysial Hormones*, Regensburg, Germany
- 'Monitoring of neuropeptide release during social behaviours within distinct brain regions using microdialysis and behavioural manipulations using retrodialysis', *39th Annual Meeting of the European Brain and Behaviour Society*, Trieste, Italy
- 2006 'Animal models to study depression and aggression', *Institute of Experimental Medicine*, Budapest, Hungary

- 'Stress responses, aggression and coping strategies in different rodent models', *Karger workshop/JB Johnson club*, Atlanta, GA
- 2005 'Animal models to study depression and aggression co-morbidity', *Lundbeck Research USA Inc.*, Newark, NJ
- 2004 'Changes in adult cell proliferation in low and high aggressive mice in relation to inborn alterations in HPA axis activity', *3rd Dutch Endo-Neuro-Psycho meeting*, Doorwerth, the Netherlands
- 2003 'Differences in HPA and 5-HT responsiveness in two mouse lines', *20th Workshop on Individual Differences in Behaviour and Physiology: Causes and Consequences*, Erice, Sicily, Italy
- 'Differences in basal and stress-induced changes HPA regulation of wild house mice selected for high and low aggression', *2nd Dutch Endo-Neuro-Psycho meeting*, Doorwerth, the Netherlands
- 2002 'Coping style and stressor susceptibility', *University of Regensburg*, Regensburg, Germany
- 'Coping style and stressor susceptibility', *Max Planck Institute of Psychiatry*, Munich, Germany
- 'Differences in stress-reactivity in two mouse lines genetically selected for high and low aggression', *Annual meeting of the Dutch Contact Group for Behavioral Genetics*, Utrecht, the Netherlands
- 2001 'Behavioral and neuroendocrine characteristics of wild house mice genetically selected for high and low aggression: Beyond a model of aggression', *5th Dutch Endo-Neuro meeting*, Doorwerth, the Netherlands

INVITED TALKS VEENEMA LAB MEMBERS

Member of Dr. Veenema's lab: **1**=graduate student, **2**=undergraduate student, **3**=postdoc

- 2018 Dr. Christina Reppucci³, 'Neural substrates underlying social motivation in juvenile rats', *Annual Meeting of the Society for Neuroscience*, San Diego, CA
- 2017 Dr. Christina Reppucci³, 'Recruitment of Vasopressin and Oxytocin Neurons in the Paraventricular and Supraoptic Hypothalamic Nuclei During Social Play in Juvenile Male and Female Rats', *World Congress on Neurohypophysial Hormones*, Mangaratiba, Rio de Janeiro, Brazil
- 2017 Caroline Smith², 'Regulation of social behavior by the brain oxytocin system during development: Possible interactions with the vasopressin system', *Massachusetts General Hospital, Neuroendocrine Unit*, Boston, MA
- 2016 Kelly Dumais², 'Oxytocin regulates social behavior and activates neural circuits in sex-specific ways in rats', *Massachusetts General Hospital, Neuroendocrine Unit*, Boston, MA
- Caroline Smith², 'Unraveling the neural basis of social novelty-seeking during adolescence: Involvement of oxytocin and opioids', *Social Brain Sciences Symposium*, Brandeis University, Waltham, MA
- Kelly Dumais², 'Sex differences in neural activation following oxytocin administration in awake rats', *Social Brain Science Symposium*, Brandeis University, Waltham, MA
- 2014 Kelly Dumais², 'Neural basis of sex-specific regulation of social behavior: Focus on the oxytocin system', *Social Brain Sciences Symposium*, Boston College, Chestnut Hill, MA
- Caroline Smith², 'Social isolation impairs while oxytocin facilitates social novelty-seeking behavior in the juvenile rat', *Social Brain Sciences Symposium*, Boston College, Chestnut Hill, MA

PROFESSIONAL SERVICES

- Present **Secretary & Treasurer**, Society for Social Neuroscience (since 2018)
Review Editor, journal *Frontiers in Endocrinology*, (since 2017)
Editorial Board member, journal *Social Neuroscience* (since 2017)
Editorial Board member, Journal *Hormones and Behavior* (since 2015)
Board member, Society for Social Neuroscience (since 2015)
Review Editor, journal *Frontiers in Behavioral Neuroscience* (since 2009)
- 2019 **Program Committee member** of the 23rd annual meeting of the Society for Behavioral Neuroendocrinology
- 2018 **Minisymposium Co-Chair**, 'Social motivation across the life span', *Annual Meeting of the Society for Neuroscience*, San Diego, CA, November 3-7
- 2017 **Symposium Co-Chair**, 'Neurobiological mechanisms of social and non-social reward', *Annual Meeting of the International Behavioral Neuroscience Society*, Hiroshima, Japan, June 26 – 30
- 2016 **Symposium Chair**, 'What do we learn about the social brain by adding sex as biological variable?' *Annual Meeting of the Society for Social Neuroscience*, San Diego CA, Nov 11
Symposium Chair, 'Neurobiology of social reward and attachment', *FENS Forum of Neuroscience Biannual Meeting*, Copenhagen, Denmark, July 2 – 6
- 2015 **Co-chair of the Program Committee**, *6th Annual Meeting of the Society for Social Neuroscience*, Chicago IL, Oct 16
Symposium Chair, 'Bed nucleus of the stria terminalis: A modulator of social behavior and stress responses in males and females', *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Pacific Grove CA, June 10 - 14
- 2014 **Co-Chair of the Program Committee**, *5th Annual Meeting of the Society for Social Neuroscience*, Washington DC, Nov 13 -14
Symposium Chair, 'Regulation of social behavior: Focus on sex differences', *44th Annual Meeting of the International Society of Psychoneuroendocrinology*, Montreal, Canada, Aug 19 - 22
- 2013 **Symposium Chair**, 'Oxytocin, brain function, and social behaviour', *45th Meeting of the European Brain and Behaviour Society*, Munich, Germany, Sept 6 - 9
- 2011 **Co-Chair of Workshop** "Building a career in academia", UMass-Amherst
Guest-Editor, Special Issue of the *Journal of Neuroendocrinology*
Chair of the Organizing Committee, *9th World Congress on Neurohypophysial Hormones*, Boston, MA, July 27 - 30
Symposium Chair, 'Stress legacy: past, present, and future', *9th Dutch Endo-Neuro-Psycho Meeting*, Lunteren, the Netherlands, May 30 - June 1
- 2010 **Symposium Chair**, "Vasopressin and vasotocin as regulators of aggression and other social behaviors", *19th World Conference of the International Society of Research on Aggression*, Storrs CT, July 27 - 31
- 2006-2009 **Coordinator**, *International Master's Programme in Experimental and Clinical Neurosciences*, University of Regensburg, Germany
- 2004-2009 **Organizer and discussion leader**, weekly scientific seminars at the Department of Behavioral Neuroendocrinology, University of Regensburg, Germany

Panel Grant Reviewer

- 2018 NIH Neurobiology of Motivated Behavior Study Section
- 2017 NSF Division of Integrative Organismal Systems, Neural Systems – Modulation
- 2016 NSF Graduate Research Fellowship Program (GRFP), Psychology
- 2014 NSF Division of Integrative Organismal Systems, Neural Systems – Modulation
- 2013 NSF Division of Integrative Organismal Systems, Neural Systems – Modulation

Ad-hoc Grant Reviewer

- 2017 NWO Dutch Research Foundation
NIH Special Emphasis Panel for Biobehavioral and Behavioral Processes
- 2016 NSF Division of Integrative Organismal Systems, Neural Systems – Modulation
- 2015 NWO Dutch Research Foundation
- 2014 Human Frontiers Science Program
OTKA Hungarian Scientific Research Fund
- 2013 Harry Frank Guggenheim Foundation
NSF Division of Integrative Organismal Systems, Neural Systems - Modulation
- 2011 NSF Division of Integrative Organismal Systems, Neural Systems Cluster
- 2010 NSF Division of Integrative Organismal Systems, Neural Systems Cluster
- 2009 DFG German Research Foundation
- 2008 NWO Dutch Research Foundation

Ad-hoc Reviewer for International Peer-Reviewed Scientific Journals (n=27)

Behavioural Brain Research; Behavior Genetics; Behavioral Neuroscience; Behavior Research Methods; Biology Letters; Biological Psychiatry; Brain Research; Current Neurobiology; Frontiers in Behavioral Neuroscience; Genes, Brain and Behavior; Hormones and Behavior; International Journal of Developmental Neuroscience; International Journal of Neuropsychopharmacology; Journal of Evolutionary Biology; Journal of Neuroendocrinology; Journal of Visual Experiments; Neural Plasticity; Neuropharmacology; Neuropsychopharmacology; Neuroscience and Biobehavioral Reviews; Neuroscience Letters; Physiology and Behavior; PLoS One; Progress in Neuro-Psychopharmacology & Biological Psychiatry; Psychoneuroendocrinology; Psychopharmacology; Translational Psychiatry

Professional Affiliations

Federation of European Neuroscience Societies
International Behavioral Neuroscience Society
Organization for the Study of Sex Differences
Society for Behavioral Neuroendocrinology
Society for Neuroscience
Society for Social Neuroscience

UNIVERSITY SERVICES

at Michigan State University (since 2017)

- Present Advisory Committee to the Chair of the Psychology Department, MSU (since 2018)
Faculty Advisory Committee Member, MSU Neuroscience Program (since 2017)
Chair, Behavioral Neuroscience Graduate Student Admissions (since 2017)

UNIVERSITY SERVICES

at Boston College (2010-2016)

- 2014-2016 Chair, Colloquium Committee, BC Psychology Department
- 2014-2015 Member, Cognitive Neuroscience Search Committee, BC Psychology Department
Member, Department Name Change Committee, BC Psychology Department
- 2012-2013 Member, Behavioral Neuroscience Search Committee, BC Psychology Department
- 2012 Member, Scholar of the College, McCarthy Prize, BC

	Member, RIG committee, BC
2012-2016	Member, Higgins Safety Committee, BC
2011-2016	Member, IACUC committee, BC
2011-2012	Member, Behavioral Neuroscience Search Committee, BC Psychology Department
2010-2014	Member, Graduate Evaluation Committee, BC Psychology Department
2010-2011	Member, Graduate Admissions & Recruitment Committee, BC Psychology Department
	Member, Strategic Planning Committee, BC Psychology Department
2010-2016	Undergraduate Advising, BC Psychology Department

TEACHING

Courses at Michigan State University (2017-present)

Brain and Behavior, undergraduate course
 Neuroscience of Psychopathologies, undergraduate course
 Neurobiology of Stress, graduate seminar

Courses at Boston College (2010-2016)

Neurobiology of Stress, undergraduate course
 Neuroscience of Psychopathology, undergraduate course
 Neural Systems and Stress, graduate seminar
 Neurobiology of Mental Illness, graduate seminar
 Neuroscience Proseminar, graduate proseminar (co-teacher)

Guest Lectures

2013 Graduate seminar on Social and Affective Neuroscience, Department of Psychology, Harvard University

Lectures at the University of Regensburg

2007-2009 Osmoregulation and Excretion (Lectures integrated in the annual 'Animal Physiology' Undergraduate Course, taught in German)
 2006-2009 Systems Neuroscience (Annual lectures within the International Master's Program in 'Experimental and Clinical Neurosciences', taught in English)

Teaching Assistantships at the University of Groningen / University of Regensburg

2004-2009 Zoology (Annual 2-week full-time research projects)
 2003-2009 Neurobiology and Neuroendocrinology (Annual 6-week full-time research projects)
 2003 Behavioural Pharmacology (Annual 4-week full-time research projects)
 1998-2001 Animal Physiology (Annual 4-week full-time research projects)

OUTREACH ACTIVITIES

Present **Participation** of the Veenema Lab in **Brain Awareness Activities** (since 2010), including the annual **MSU Neuroscience Fair** and **MSU Elementary Science Nights**

2018 **Panelist** in a **Panel Discussion** on **NSF GRFP applications** at MSU with the audience being senior undergraduate students and first-year and second-year graduate students
Participation in a lunch with undergraduate minority students selected for the **MSU Summer Research Opportunities Program** to talk about strategies applying to graduate school
Mentoring Natasha Mendez, an undergraduate student from Puerto Rico who participates in NIH Blueprint Initiative Neuroscience Program to "**Enhancing Neuroscience Diversity**

- through **Undergraduate Research Education Experiences (ENDURE)**" at MSU and receives hands-on training and mentoring in the lab over the summer
- Panelist** in a **Research Forum** "Getting The Most Out of Your Conference Experience", MSU Neuroscience program
- 2017 **Neuroscience Lab Open House**, MSU Neuroscience undergraduate students interested in research were invited to get an inside look at the research conducted in the Veenema lab with live demonstrations and hands-on opportunities
- Psychology Research Open House**, MSU Psychology undergraduate students interested in research were invited to get an inside look at the research conducted in the Veenema lab with live demonstrations and hands-on opportunities
- Panelist** in a **Panel Discussion on NSF GRFP applications** at MSU with the audience being senior undergraduate students and first-year and second-year graduate students
- 2016 **Mentoring High School student** Julia Kastner who participates in the program InSPIRE (Interested Students Pursuing Internship Research Experiences) at Concord Academy, Concord, MA and was an intern in the Veenema lab over the summer of 2016
- Bring-your-parents-to-the-lab-day** (May 21), family of students and staff members of the Veenema lab were invited to get an inside look at the research conducted in the Veenema lab with live demonstrations and hands-on opportunities
- 2015-2017 **Mentoring High School student** Zoe Shaw, who participates in the Science Research Program at John Jay High School, New York, NY and was an intern in the Veenema lab over the summer of 2016
- 2015 **Mentor** in a **Trainee Workshop on Funding Opportunities at NSF and NIH** at UMass-Amherst
- Interviewed** by the **Thompson Island Outward Bound Education Center** to talk about what it is like to be a behavioral neuroscientist
- Speaker** at **MIT Museum** Second Fridays Program "A good night for a bad date", giving a talk about sex differences in social behavior and the roles of vasopressin and oxytocin in mediating these differences
- 2014 **Mentor** in the **Mentor/Mentee program** of the *International Society of Psychoneuroendocrinology* to advise young fellows on academic and personal matters related to a career in the field of Psychoneuroendocrinology
- Panelist** in a **Panel Discussion on Women in Science** at Boston College
- 2013 **Speaker** at the **Summer Science Institute** for High School/Middle School Science teachers at the Dover/Sherborne High School, organized by The Education Cooperative
- Speaker** in the **Boston College's Women in Science High School Program**
- 2012 **Mentor** in **Professional Development Workshop** at UMass-Amherst
- Mentor** in **Speed Mentoring Session** and in **Meet the Professor Luncheon** of the *Society for Behavioral Neuroendocrinology*
- 2012-2015 **Mentoring High School student** Sofia Gilary, who participated in the Science Research Program at John Jay High School, New York, NY and was an intern in the Veenema lab
- 2011 **Mentor** in a **Workshop "Building a Career in Academia"** at UMass-Amherst
- 2011-2012 **Mentoring High School student** Kat Paradis, who participated in the Science Research Program at Saratoga Springs High School, New York, NY
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POSTER PRESENTATIONS AT SCIENTIFIC MEETINGS

Member of Dr. Veenema's lab: **1**=graduate student, **2**=undergraduate student, **3**=postdoc

- 2018 Bredewold R, Washington CL, Veenema AH. Sex differences in social reward regulation in juvenile rats: Focus on glutamate signaling in the lateral septum. *Annual Meeting of the Society for Neuroscience*, Washington, DC
- Reppucci CJ³, Bredewold R, Posani SS¹, Washington CL, Veenema AH. Activation of ventral tegmental area supports the expression of social play behavior in juvenile rats. *Annual Meeting of the Society for Social Neuroscience*, Washington, DC
- Bredewold R, Washington CL, Veenema AH. Sex differences in social reward regulation in juvenile rats: Focus on glutamate signaling in the lateral septum. *Annual Meeting of the Society for Social Neuroscience*, Washington, DC
- Reppucci CJ³, Bredewold R, Posani SS¹, Washington CL, Veenema AH. Activation of ventral tegmental area supports the expression of social play behavior in juvenile rats. *Annual Meeting of the Society for Social Neuroscience*, Washington, DC
- Bredewold R, Nascimento NF², Ro GS², Cieslewski SE², Reppucci CJ¹, Veenema AH. Vasopressin and social play modulate lateral septum neurotransmitter release in sex-specific ways. *International Congress of Neuroendocrinology*, Toronto, Canada
- Reppucci CJ³, Gergely CK², Nascimento NF, Ro GS², Bredewold R, Veenema AH. Recruitment of vasopressinergic and oxytonergic brain regions in response to social play. *International Congress of Neuroendocrinology*, Toronto, Canada
- 2017 Bredewold R, Schiavo J², Verreij M², Veenema AH. Vasopressin in the lateral septum alters the extracellular release of various neurotransmitters in male and female juvenile rats: Implications for sex-specific regulation of social play. *Annual Meeting of the Society for Neuroscience*, Washington, DC
- Reppucci CJ³, Gergely CK², Nascimento NF, Ro GS², Bredewold R, Veenema AH. Recruitment of the ventral tegmental area and its afferent pathways during socially rewarding behavior in juvenile male and female rats. *Annual Meeting of the Society for Neuroscience*, Washington, DC
- Smith CJW¹, DiBenedictis BT², Veenema AH. Vasopressin and oxytocin in the social behavior neural network: How do fiber projections and receptors compare? *Annual Meeting of the Society for Neuroscience*, Washington, DC
- Smith JA³, Bredewold R, Reppucci CJ³, Veenema AH. Behavioral and neuroanatomical characterization of the vasopressin system in the bed nucleus of the stria terminalis reveals potential coordination of separate populations of vasopressin neurons in mediating social behavior. *Annual Meeting of the Society for Neuroscience*, Washington, DC
- Bredewold R, Schiavo J², Verreij M², Veenema AH. Vasopressin in the lateral septum alters the extracellular release of various neurotransmitters in male and female juvenile rats: Implications for sex-specific regulation of social play. *Annual Meeting of the Society for Social Neuroscience*, Washington, DC
- Reppucci CJ³, Gergely CK², Nascimento NF, Ro GS², Bredewold R, Veenema AH. Recruitment of the ventral tegmental area and its afferent pathways during socially rewarding behavior in juvenile male and female rats. *Annual Meeting of the Society for Social Neuroscience*, Washington, DC
- Smith JA³, Bredewold R, Reppucci CJ³, Veenema AH. Behavioral and neuroanatomical characterization of the vasopressin system in the bed nucleus of the stria terminalis reveals

potential coordination of separate populations of vasopressin neurons in mediating social behavior. *Annual Meeting of the Society for Social Neuroscience*, Washington, DC

Bredewold R, Nascimento NF, Veenema AH. Involvement of dopamine and noradrenaline in the sex-specific regulation of social play by vasopressin. *World Congress on Neurohypophysial Hormones*, Mangaratiba, Brazil

Reppucci CJ^{3*}, Gergely CK², Veenema AH. Recruitment of vasopressin and oxytocin neurons in the paraventricular and supraoptic hypothalamic nuclei during social play in juvenile male and female rats. *World Congress on Neurohypophysial Hormones*, Mangaratiba, Brazil ***Travel Award**

Smith JA^{3*}, Bredewold R, Reppucci CJ³, Veenema AH. Behavioral and neuroanatomical characterization of the vasopressin system in the bed nucleus of the stria terminalis reveals potential coordination of separate populations of vasopressin neurons in mediating social behavior. *World Congress on Neurohypophysial Hormones*, Mangaratiba, Brazil ***Travel Award**

Bredewold R, Nascimento NF, Veenema AH. Involvement of dopamine and noradrenaline in the sex-specific regulation of social play by vasopressin. *Annual Meeting of the International Behavioral Neuroscience Society*, Hiroshima, Japan

Bredewold R, Nascimento NF, Veenema AH. Involvement of dopamine and noradrenaline in the sex-specific regulation of social play by vasopressin. *Michigan Chapter of the Society for Neuroscience Meeting*, Ann Arbor, MI

Reppucci CJ³, Gergely CK², Nascimento NF, Ro GS², Bredewold R, Veenema AH. A novel role for orexin in regulating socially rewarding behavior in juvenile rats. *Michigan Chapter of the Society for Neuroscience Meeting*, Ann Arbor, MI

2016 Bredewold R, Nascimento NF, Veenema AH. Involvement of dopamine and noradrenaline in the sex-specific regulation of social play by vasopressin. *Annual Meeting of the Society for Neuroscience*, San Diego, CA

DiBenedictis BT³, Smith CJW¹, Nussbaum ER², Cheung HK², Veenema AH. Involvement of ventral pallidal vasopressin in the sex-specific regulation of opposite-sex preference in rats. *Annual Meeting of the Society for Neuroscience*, San Diego, CA

Dumais KM¹, Kulkarni P, Ferris CF, Veenema AH. Sex differences in neural activation following different routes of oxytocin administration in awake adult rats. *Annual Meeting of the Society for Neuroscience*, San Diego, CA

Nascimento NF, Ro GS², Reppucci CJ³, Bredewold R, Veenema AH. Lateral Septum Vasopressin System Interacts With Nucleus Accumbens and Prefrontal Cortex to Regulate Social Play in Sex-Specific Ways. *Annual Meeting of the Society for Neuroscience*, San Diego, CA

Smith CJW¹, Ratnaseelan A², Li S², Veenema AH. Involvement of mu opioid receptors in the regulation of juvenile social novelty-seeking behavior: Brain region-specific effects and modulation by social separation. *Annual Meeting of the Society for Neuroscience*, San Diego, CA

Reppucci CJ, Gergely CK, Nascimento NF, Ro GS, Bredewold R, Veenema AH. Recruitment of orexin/hypocretin neurons during socially rewarding behavior in juvenile male and female rats. *Annual Meeting of the Society for Neuroscience*, San Diego, CA

Worley NB¹, Dumais KM¹, Yuan JC², Newman LE², Alonso AG², Veenema AH. Involvement of androgen, but not estrogen, receptors in the masculinization of the oxytocin receptor in the bed nucleus of the stria terminalis. *Annual Meeting of the Society for Neuroscience*, San Diego, CA

Bredewold R, Nascimento NF, Veenema AH. Involvement of dopamine and noradrenaline in the sex-specific regulation of social play by vasopressin. *Annual Meeting of the Society for Social Neuroscience*, San Diego, CA

DiBenedictis BT³, Smith CJW¹, Nussbaum ER², Cheung HK², Veenema AH. Involvement of ventral pallidal vasopressin in the sex-specific regulation of opposite-sex preference in rats. *Annual Meeting of the Society for Social Neuroscience*, San Diego, CA

Dumais KM¹, Kulkarni P, Ferris CF, Veenema AH. Sex differences in neural activation following different routes of oxytocin administration in awake adult rats. *Annual Meeting of the Society for Social Neuroscience*, San Diego, CA

Nascimento NF, Ro GS², Reppucci CJ³, Bredewold R, Veenema AH. Lateral Septum Vasopressin System Interacts With Nucleus Accumbens and Prefrontal Cortex to Regulate Social Play in Sex-Specific Ways. *Annual Meeting of the Society for Social Neuroscience*, San Diego, CA

Smith CJW¹, Ratnaseelan A², Li S², Veenema AH. Involvement of mu opioid receptors in the regulation of juvenile social novelty-seeking behavior: Brain region-specific effects and modulation by social separation. *Annual Meeting of the Society for Social Neuroscience*, San Diego, CA

Reppucci CJ, Gergely CK, Nascimento NF, Ro GS, Bredewold R, Veenema AH. Recruitment of orexin/hypocretin neurons during socially rewarding behavior in juvenile male and female rats. *Annual Meeting of the Society for Social Neuroscience*, San Diego, CA

Worley NB¹, Dumais KM¹, Yuan JC², Newman LE², Alonso AG², Veenema AH. Involvement of androgen, but not estrogen, receptors in the masculinization of the oxytocin receptor in the bed nucleus of the stria terminalis. *Annual Meeting of the Society for Social Neuroscience*, San Diego, CA

Bredewold R, Nascimento N, Veenema AH. Involvement of dopamine and noradrenaline in the sex-specific regulation of social play by vasopressin. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Montreal, Canada

DiBenedictis BT³, Smith CJW¹, Nussbaum ER², Cheung HK², Veenema AH. Involvement of ventral pallidal vasopressin in the sex-specific regulation of opposite-sex preference in rats. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Montreal, Canada

Dumais KM¹, Kulkarni P, Ferris CF, Veenema AH. Sex differences in neural activation following oxytocin administration in awake rats. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Montreal, Canada

Smith CJW¹, Ratnaseelan A², Li S², Veenema AH. Involvement of mu opioid receptors in the regulation of juvenile social novelty-seeking behavior: Brain region-specific effects and modulation by social separation. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Montreal, Canada

Reppucci CJ, Gergely CK, Nascimento NF, Ro GS, Bredewold R, Veenema AH. Recruitment of orexin/hypocretin neurons during socially rewarding behavior in juvenile male and female rats. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Montreal, Canada

Worley NB¹, Dumais KM¹, Yuan JC², Newman LE², Alonso AG², Veenema AH. Involvement of androgen, but not estrogen, receptors in the masculinization of the oxytocin receptor in the bed nucleus of the stria terminalis. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Montreal, Canada

DiBenedictis BT³, Nussbaum ER², Cheung HK², Veenema AH. Age and sex differences in forebrain distribution of vasopressin and oxytocin fibers in the rat. *Annual Meeting of the Organization for the Study of Sex Differences*, Philadelphia, PA

Dumais KM¹, Kulkarni P, Ferris CF, Veenema AH. Sex differences in neural activation following oxytocin administration in awake rats. *Annual Meeting of the Organization for the Study of Sex Differences*, Philadelphia, PA

Smith CJW¹, Ratnaseelan A², Poehlmann ML², Veenema AH. Pre-pubertal emergence of sex differences in oxytocin and vasopressin V1a receptor binding in the rat brain. *Annual Meeting of the Organization for the Study of Sex Differences*, Philadelphia, PA

Worley NB¹, Dumais KM¹, Yuan JC², Newman LE², Alonso AG², Veenema AH. Molecular mechanisms underlying sex differences in oxytocin system. *Annual Meeting of the Organization for the Study of Sex Differences*, Philadelphia, PA

Bredewold R, Schiavo J², Verreij M², Ro G², Veenema AH. Vasopressin regulates social play in sex-specific ways through glutamate modulation in the lateral septum. *Biannual Meeting of the FENS Forum of Neuroscience*, Copenhagen, Denmark

Nussbaum ER², Cheung HK², DiBenedictis BT³, Veenema AH. Age and sex differences in forebrain distribution of vasopressin and oxytocin fibers in the rat. Annual NEURON conference, Quinnipiac University, Hamden, CT

2015 Bredewold R, Schiavo J², Verreij M², Ro G², Veenema AH. Vasopressin regulates social play in sex-specific ways through glutamate modulation in the lateral septum. *Annual Meeting of the Society for Neuroscience*, Chicago, IL

DiBenedictis BT³, Bredewold R, Veenema AH. Dynamic vasopressin release in the lateral septum during social recognition in adult and juvenile male and female rats. *Annual Meeting of the Society for Neuroscience*, Chicago, IL

Dumais KM¹, Alonso AG², Gillespie TC², Cho D², Bredewold R, Veenema AH. Oxytocin in the bed nucleus of the stria terminalis and central amygdala regulates social behavior in sex-specific ways in rats. *Annual Meeting of the Society for Neuroscience*, Chicago, IL

Smith CJW¹, Ratnaseelan A², Poehlmann ML², Veenema AH. Sub region-specific distribution of μ -opioid receptors in the striatum of juvenile rats: Implications for social novelty preference. *Annual Meeting of the Society for Neuroscience*, Chicago, IL

Veenema AH, Bredewold R, Varela J, Christianson JP. Vasopressin modulates lateral septum neuronal activity in sex-specific ways in juvenile rats. *Annual Meeting of the Society for Neuroscience*, Chicago, IL

Worley NB¹, Dumais KM¹, Newman LE², Alonso AG², Veenema AH. Molecular mechanisms underlying sex differences in oxytocin receptors in the rat brain. *Annual Meeting of the Society for Neuroscience*, Chicago, IL

Bredewold R, Schiavo J², Verreij M², Ro G², Veenema AH. Vasopressin regulates social play in sex-specific ways through glutamate modulation in the lateral septum. *Annual Meeting of the Society for Social Neuroscience*, Chicago, IL

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Dumais KM¹, Alonso AG², Gillespie TC², Cho D², Bredewold R, Veenema AH. Oxytocin in the bed nucleus of the stria terminalis and central amygdala regulates social behavior in sex-specific ways in rats. *Annual Meeting of the Society for Social Neuroscience*, Chicago, IL

Smith CJW¹, Ratnaseelan A², Poehlmann ML², Veenema AH. Sub region-specific distribution of μ -opioid receptors in the striatum of juvenile rats: Implications for social novelty preference. *Annual Meeting of the Society for Social Neuroscience*, Chicago, IL

Veenema AH, Bredewold R, Varela J, Christianson JP. Vasopressin modulates lateral septum neuronal activity in sex-specific ways in juvenile rats. *Annual Meeting of the Society for Social Neuroscience*, Chicago, IL

Worley NB¹, Dumais KM¹, Newman LE², Alonso AG², Veenema AH. Molecular mechanisms underlying sex differences in oxytocin receptors in the rat brain. *Annual Meeting of the Society for Social Neuroscience*, Chicago, IL

Bredewold R, Schiavo J², Verreij M², Veenema AH. Vasopressin in the lateral septum modulates the release of glutamate, but not GABA, differently in male and female juvenile rats. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Pacific Grove, CA

DiBenedictis BT³, Bredewold R, Veenema AH. Dynamic vasopressin release in the lateral septum during social recognition in adult and juvenile male and female rats. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Pacific Grove, CA

Dumais KM¹, Alonso AG², Bredewold R, Veenema AH. Sex-specific regulation of social recognition by oxytocin in the bed nucleus of the stria terminalis. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Pacific Grove, CA

Smith CJW¹, Poehlmann ML², Li S², Bredewold R, Veenema AH. Age differences in oxytocin and vasopressin V1a receptor binding in the rat brain: Implications for juvenile social behavior. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Pacific Grove, CA

Worley NB¹, Dumais KM¹, Newman LE², Veenema AH. Molecular mechanisms underlying sex differences in oxytocin receptors in the rat brain. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Pacific Grove, CA

2014 Bredewold R, Schiavo J², Verreij M², Veenema AH. Mechanisms underlying sex-specific regulation of social play by vasopressin: An in vivo microdialysis study. *Annual Meeting of the Society for Neuroscience*, Washington, DC

Dumais KM¹, Kulkarni P, Ferris CF, Veenema AH. Oxytocin administration induces sex-specific alterations in brain activation in awake rodents using fMRI. *Annual Meeting of the Society for Neuroscience*, Washington, DC

Smith CJW¹, Poehlmann ML², Wilkins KB², Bredewold R, Veenema AH. Age differences in the brain oxytocin system: implications for juvenile social motivation. *Annual Meeting of the Society for Neuroscience*, Washington, DC

Worley NB¹, Newman LE², Veenema AH. Mechanisms underlying sex differences in the brain oxytocin system. *Annual Meeting of the Society for Neuroscience*, Washington, DC

Bredewold R, Schiavo J², Verreij M², Veenema AH. Mechanisms underlying sex-specific regulation of social play by vasopressin: An in vivo microdialysis study. *Annual Meeting of the Society for Social Neuroscience*, Washington, DC

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Smith CJW¹, Poehlmann ML², Wilkins KB², Bredewold R, Veenema AH. Age differences in the brain oxytocin system: implications for juvenile social motivation. *Annual Meeting of the Society for Social Neuroscience*, Washington, DC

Worley NB¹, Newman LE², Veenema AH. Mechanisms underlying sex differences in the brain oxytocin system. *Annual Meeting of the Society for Social Neuroscience*, Washington, DC

Bredewold R, Schiavo J², Verreij M², Veenema AH. Involvement of GABA and glutamate in the sex-specific regulation of social play by vasopressin. *Annual Meeting of the International Society of Psychoneuroendocrinology*, Montreal, Canada

Dumais KM¹, Alonso AG², Immormino MA², Bredewold R, Veenema AH. The sexually dimorphic oxytocin system in the rat brain: Implications for sex-specific regulation of social behavior. *Biannual Meeting of the FENS Forum of Neuroscience*, Milan, Italy

Smith CJ¹, Wilkins KB², Mogavero JN², Veenema AH. Social isolation impairs while oxytocin facilitates social novelty-seeking behavior in the juvenile rat. *Biannual Meeting of the FENS Forum of Neuroscience*, Milan, Italy

Wilkins KB², Smith CJ¹, Veenema AH. Social isolation impairs novelty preference, while oxytocin shows a region-specific facilitative role. *Annual Meeting of the Eastern Psychological Association*, Boston, MA

Alonso AG², Dumais KM¹, Veenema AH. Oxytocin in the bed nucleus of the stria terminalis modulates sexually dimorphic social recognition behavior in rats. *Annual NEURON conference*, Hamden, CT

Smith CJ¹, Wilkins KB², Mogavero JN², Veenema AH. Social isolation impairs while oxytocin facilitates social novelty-seeking behavior in the juvenile rat. *Annual NEURON conference*, Hamden, CT

2013 Dumais KM¹, Alonso AG², Immormino MA², Karakula SL², Mayer T², Bredewold R, Veenema AH. The role of the amygdala in sex-specific regulation of social interest in rats. *Annual Symposium of the Center for Neuroendocrine Studies*, Amherst, MA

Smith CJ¹, Wilkins KB², Mogavero JN², Veenema AH. Social isolation impairs while oxytocin facilitates social novelty-seeking behavior in the juvenile rat. *Annual Symposium of the Center for Neuroendocrine Studies*, Amherst, MA

Alonso AG², Dumais KM¹, Veenema AH. Oxytocin in the bed nucleus of the stria terminalis modulates sexually dimorphic social recognition behavior in rats. *Annual Symposium of the Center for Neuroendocrine Studies*, Amherst, MA

Schiavo J², Bredewold R, Veenema AH. Modulation of social play behavior through interactions of vasopressin and GABA in the lateral septum. *Annual Symposium of the Center for Neuroendocrine Studies*, Amherst, MA

Wu C², Bredewold R, Veenema AH. Social play behavior in rats: The role of oxytocin in the nucleus accumbens. *Annual Symposium of the Center for Neuroendocrine Studies*, Amherst, MA

Dumais KM¹, Alonso A², Mayer T², Bredewold R, Veenema AH. Sex differences in oxytocin receptor binding in the bed nucleus of the stria terminalis and amygdala: Implications for differential

expression and regulation of social behavior. *Annual Meeting of the Society for Neuroscience*, San Diego, CA

Smith CJ¹, Mogavero JN², Wilkins KB², Reardon KI², Bredewold R, Veenema AH. Role of opioids, oxytocin, and stress in modulating social novelty-seeking behavior in the juvenile rat. *Annual Meeting of the Society for Neuroscience*, San Diego, CA

Bredewold R, Smith CJ¹, Veenema AH. Sex-specific regulation of social play by vasopressin and oxytocin depends on social context. *Annual Meeting of the Society for Neuroscience*, San Diego, CA

Dumais KM¹, Alonso A², Mayer T², Bredewold R, Veenema AH. Sex differences in oxytocin receptor binding in the bed nucleus of the stria terminalis and amygdala: Implications for differential expression and regulation of social behavior. *Annual Meeting of the Society for Social Neuroscience*, San Diego, CA

Smith CJ¹, Mogavero JN², Wilkins KB², Reardon KI², Bredewold R, Veenema AH. Role of opioids, oxytocin, and stress in modulating social novelty-seeking behavior in the juvenile rat. *Annual Meeting of the Society for Social Neuroscience*, San Diego, CA

Bredewold R, Smith CJ¹, Veenema AH. Sex-specific regulation of social play by vasopressin and oxytocin depends on social context. *Annual Meeting of the Society for Social Neuroscience*, San Diego, CA

Bredewold R, Smith CJ¹, Veenema AH. Sex-specific regulation of social play by vasopressin and oxytocin depends on social context. *45th European Brain and Behavior Society Meeting*, Munich, Germany

Dumais KM¹, Alonso A², Mayer T², Bredewold R, Veenema AH. Sex differences in oxytocin receptor density in the bed nucleus of the stria terminalis: Implications for differential regulation of social recognition. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Atlanta, GA

Smith CJ¹, Mogavero JN², Bredewold R, Veenema AH. A brief period of social isolation abolishes social novelty-seeking behavior in the juvenile rat. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Atlanta, GA

Bredewold R, Smith CJ¹, Veenema AH. Sex-specific regulation of social play by vasopressin and oxytocin depends on social context. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Atlanta, GA

Dumais KM¹, Mayer T², Bredewold R, Veenema AH. Sex differences in social interest correlate with oxytocin receptor densities in subregions of the amygdala. *Annual NEURON conference*, Hamden, CT

Smith CJ¹, Mogavero JN², Barnard EM², Bredewold R, Veenema AH. Social novelty -seeking behavior in the juvenile rat: roles of sex, anxiety, and neuropeptides. *Annual NEURON conference*, Hamden, CT

2012 Dumais KM^{1*}, Mayer T², Bredewold R, Veenema AH. Sex differences in social interest correlate with oxytocin receptor densities in subregions of the amygdala. *Annual Symposium of the Center for Neuroendocrine Studies*, Amherst, MA ***Poster Award**

Smith CJ¹, Mogavero JN², Barnard EM², Bredewold R, Veenema AH. Social novelty -seeking behavior in the juvenile rat: roles of sex, anxiety, and neuropeptides. *Annual Symposium of the Center for Neuroendocrine Studies*, Amherst, MA

Bredewold R, Smith CJ¹, Veenema AH. Neural circuitry of social play: Distinct modes of interplay between septal vasopressin and GABA in males and females. *Annual Meeting of the Society for Neuroscience*, New Orleans, LA

Bredewold R*, Smith CJ¹, Veenema AH. Neural circuitry of social play: Distinct modes of interplay between septal vasopressin and GABA in males and females. *Annual Meeting of the Society for Social Neuroscience*, New Orleans, LA ***Travel Award**

Bredewold R, Smith CJ¹, Veenema AH. Neural circuitry of social play: Involvement of septal vasopressin and GABA. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Madison, WI

Dumais KM¹, Mayer T², Bredewold R, Veenema AH. Sex differences in social interest correlate with oxytocin receptor densities in subregions of the amygdala. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Madison, WI

Meng Q¹, Bredewold R, Smith CJ¹, Veenema AH. Adverse early life peer interactions alter anxiety and play-fighting behaviors. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Madison, WI

Smith CJ¹, Mogavero JN², Barnard EM², Bredewold R, Veenema AH. Social novelty -seeking behavior in the juvenile rat: roles of sex, anxiety, and neuropeptides. *Annual Meeting of the Society for Behavioral Neuroendocrinology*, Madison, WI

Bredewold R, Smith CJ, Veenema AH. Neural circuitry of social play: Involvement of septal vasopressin and GABA. *Annual Meeting of the International Behavioural and Neural Genetics Society*, Boulder, CO

2011 Bredewold R, Smith CJ¹, Veenema AH. Septal vasopressin regulates play-fighting in male and female juvenile rats: Sex- and context-specific effects. *Annual Meeting of the Society for Neuroscience*, Washington, DC

Bredewold R, Smith CJ¹, Veenema AH. Septal vasopressin regulates play-fighting in male and female juvenile rats: Sex- and context-specific effects. *Meeting of the Society for Social Neuroscience*, Washington, DC

Dumais KM^{1*}, Mayer TE², Smith CJ¹, Bredewold R, Veenema AH. From anti-social to pro-social: Do sex steroids and oxytocin play a role? *Workshop on the Biology of Pro-Social Behavior*, Emory University, Atlanta, GA ***Travel Award**

Smith CJ^{1*}, Bredewold R, Veenema AH. Septal vasopressin regulates play-fighting in male and female juvenile rats: Sex- and context-specific effects. *Workshop on the Biology of Pro-Social Behavior*, Emory University, Atlanta, GA ***Travel Award**

Meng Q¹, Bredewold R, Smith CJ¹, Veenema AH. Effects of Post-weaning Adverse Peer Interactions on Emotional and Social behaviors. *Workshop on the Biology of Pro-Social Behavior*, Emory University, Atlanta, GA

Dumais KM¹, Mayer TE², Smith CJ¹, Bredewold R, Veenema AH. From anti-social to pro-social: Do sex steroids and oxytocin play a role? *9th World Congress on Neurohypophysial Hormones*, Boston, MA

Bredewold R, Smith CJ¹, Veenema AH. Septal vasopressin regulates play-fighting in male and female juvenile rats: Sex- and context-specific effects. *9th World Congress on Neurohypophysial Hormones*, Boston, MA