

Curriculum Vitae
Mary “Allie” Holschbach

Department of Psychology and Neuroscience
College of Psychology
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Education

- 2015-pres Postdoctoral Fellow in Biomedical Sciences
Postdoctoral Advisor: Dr. Robert J. Handa
Colorado State University, Fort Collins, CO
- 2017 NextProf Science: Future Faculty Workshop on Diversifying Academia
University of Michigan
- 2015 Ph.D. Neuroscience
Ph.D. Advisor: Dr. Joseph S. Lonstein
Michigan State University, East Lansing, MI
Dissertation: Peripartum plasticity in the serotonergic dorsal raphe: implications for postpartum socioemotional behavior and physiology
- 2015 Certificate in Diversity Inclusion and Sensitivity
Michigan State University, East Lansing, MI
- 2012 Congress MBL FAPESP USP Joint Course: “Neural Systems and Behavior,” University of São Paulo / Brazil with the support of FAPESP (São Paulo Research Foundation)
- 2008 Continuing Education Course: “Neuroanatomy: Dissection of the human brain and spinal cord”
College of Health Sciences, Marquette University, Milwaukee, WI
- 2006-2010 B.S. Biology with an Option in Neurobiology
B.S. Psychology with Honors
University of Wisconsin, Madison, WI
Honors Thesis: Androgen responsiveness in *Peromyscus californicus*.

Awards and Honors

- 2015 Award-winning trainee presentation, Front Range Neuroscience Group
- 2013- 2015 NIH National Research Service Award
- 2014 Travel fellowship from MSU Graduate School to attend ICN/SBN
- 2014 Travel fellowship from MSU Neuroscience Program to attend IBNS
- 2013 Travel fellowship from MSU Graduate School to attend SBN
- 2012-2013 MSU Neuroscience Program Training Grant, Integrative Neurobiology of Social Processes – Predoctoral fellowship
- 2012 Travel fellowship from MSU Council of Graduate Students to attend SfN
- 2012 Travel fellowship from MSU Neuroscience Program to attend SfN
- 2012 NSF Graduate Research Fellowship Program - Honorable Mention
- 2011 Travel fellowship from MSU Neuroscience Program to attend SfN
- 2010-2012 MSU Neuroscience Program Training Grant, Interdisciplinary Training Program in Neuroscience – Predoctoral fellowship
- 2010 Early Start Fellowship, MSU
- 2009 Summer Senior Honors Thesis Grant, University of Wisconsin – Madison
- 2007, 2009-2010 Dean’s List, University of Wisconsin – Madison

Research and Teaching Experience

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| 2017 | Guest Lecturer, BMS 425 Intro to Systems Neurobiology, Colorado State University |
| 2016 | Guest Lecturer, BMS 503 Developmental Neurobiology, Colorado State University |
| 2015-pres | Postdoctoral Research Assistant to Dr. Bob Handa, Biomedical Sciences, Colorado State University |
| 2015-pres | Research mentor to undergraduate trainees in the Handa laboratory, Colorado State University |
| 2010-2015 | Research Assistant to Dr. Joe Lonstein, Neuroscience Program, Michigan State University |
| 2010-2015 | Research mentor to undergraduate and graduate trainees in the Lonstein laboratory, Michigan State University |
| 2012 | Teaching Assistant & Guest Lecturer, PSY 209 Brain and Behavior, Michigan State University |
| 2010 | Research Assistant to Dr. Cheryl Sisk, Neuroscience Program, Michigan State University |
| 2008-2010 | Undergraduate Research Assistant to Dr. Catherine Marler, Dept. of Psychology and Neuroscience Training Program, University of Wisconsin |
| 2006-2008 | Laboratory Intern, DuPont Danisco, Waukesha, WI 53186 |
| 2007 | Undergraduate Research Assistant to Dr. Thomas Sutula, Dept. of Neurology, University of Wisconsin |

Leadership Experience and Professional Service

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| 2017 | Hosted invited speaker for CSU Postdoctoral Association's seminar series |
| 2016 | Interviewer in search for Associate Dean of the Graduate School, Colorado State University |
| 2016 | Presenter, Brain Awareness Week, Colorado State University |
| 2015-pres | Founding Member and Vice President of Advocacy for Colorado State University's Postdoctoral Association |
| 2015-pres | Poster judge for 4 internal CSU conferences |
| 2015-2016 | Poster judge for Front Range Neuroscience Group (SfN local chapter) conference |
| 2014-2015 | President, Neuroscience Program Graduate Student Council at Michigan State University |
| 2010-2015 | Presenter, Brain Awareness Week, Michigan State University |
| 2010-2015 | Hosted 3 invited speakers for the Neuroscience Program's seminar series at Michigan State University |
| 2010-2013 | Presenter, Brain Bee, Michigan State University |
| 2011-2013 | Neuroscience Program Representative, Council of Graduate Students at Michigan State University |
| 2010-2012 | Class Representative, Neuroscience Program Graduate Student Council at Michigan State University |

Publications

Holschbach MA, Borrow AP, Handa RJ (2017). Honing in on hormone sensitive neural targets for therapeutic intervention: Mission impossible? *Future Science OA* 3(3).

Holschbach, MA, Lonstein, JS (2017). Motherhood and infant contact regulate neuroplasticity in the serotonergic midbrain dorsal raphe. *Psychoneuroendocrinology* (76) 97-106.

Holschbach MA, Handa RJ. Androgen Action and Stress. In: Fink G., ed. *Stress: Neuroendocrinology and Neurobiology* (2017) 227–235. Academic Press.

Rosetti, MF, Cambiasso, MJ, **Holschbach, MA**, Cabrera, R (2016). Oestrogens and progestagens: syntheses and action in the brain. *Journal of Neuroendocrinology* 28(7).

Smith, CD, **Holschbach, MA**, Olsewicz, J, Lonstein, JS (2012). Noradrenergic alpha-2 receptor antagonism in the ventral bed nucleus of the stria terminalis and medial preoptic area impairs maternal care in female rats. *Psychopharmacology* 224(2):263-276.

Gleason, ED, **Holschbach, MA**, Marler, CA (2012). Females investigate males with higher testosterone, but compatibility drives female preference and reproductive success in the monogamous California mouse (*Peromyscus californicus*). *Hormones and Behavior* 61(1):100-107.

Prepared and Submitted Manuscripts

Holschbach, MA, Vitale, EV, Lonstein, JS (in prep). Serotonin-specific lesions of the dorsal raphe alter maternal care and reduce aggression in postpartum rats.

Holschbach, MA, Turnidge, AL, Handa, RJ (in prep). Acute activation of glucocorticoid receptors increases transcription of serotonin-related mRNA transcripts in the dorsal raphe.

Holschbach, MA, Grieb, ZA, Lonstein, JS (in prep). Postpartum anxiety is affected by litter age in experienced rat mothers.

Oral Conference Presentations

Holschbach, MA, Lonstein, JS. Lesioning the serotonergic dorsal raphe reduces postpartum aggression and alters caregiving behaviors in postpartum rats. Front Range Neuroscience Group. Fort Collins, CO. December 2015.

Holschbach, MA, Lonstein, JS. "Postpartum neuroplasticity in the midbrain serotonergic dorsal raphe: potential mechanism for adaptations in maternal behavior and physiology." Society for Neuroscience. Washington D.C. November 2014.

Holschbach, MA, Lonstein, JS. "Social and endocrine factors drive postpartum neuroplasticity in the serotonergic dorsal raphe." Society for Behavioral Neuroendocrinology / International Congress of Neuroendocrinology. Sydney, Australia. August 2014.

Poster Presentations

Holschbach, MA, Turnidge, AL, Handa, RJ. "Acute Activation of Glucocorticoid Receptors Increases Transcription of Serotonin-Related mRNA Transcripts in the Dorsal Raphe." Endocrinology. Orlando, FL. April 2017.

Holschbach, MA, Handa, RJ. Developmental expression of Estrogen Receptor Beta in the dorsal raphe and prefrontal cortex of male and female mice. Society for Neuroscience. San Diego, CA. November 2016.

Vitale, EV, **Holschbach, MA**, Lonstein, JS. Lesioning the serotonergic dorsal raphe alters various aspects of maternal behavior. Society for Neuroscience. San Diego, CA. November 2016.

Holschbach, MA, Handa, RJ. Previous anxiogenic experience buffers effects of forced swim test: potential role for Estrogen Receptor Beta in the Dorsal Raphe. *Neurobiology of Stress*. Newport Beach, CA. April 2016.

Holschbach, MA, Vitale, EV, Lonstein, JS. Postpartum lesions targeting serotonergic neurons in the dorsal raphe alter various aspects of maternal behavior. *Society for Neuroscience*. Chicago, IL. October 2015.

Holschbach, MA, Vitale, EV, Lonstein, JS. Serotonin-specific lesions of the dorsal raphe alter nursing, reduce licking, and reduce aggression in postpartum rats. *International Workshop on Neuroendocrinology*. Mendoza, Argentina. August 2015.

Holschbach, MA, Vitale, EV, Lonstein, JS. Serotonin-specific lesions of the dorsal raphe impair caregiving, increase anxiety, and reduce aggression in postpartum rats. *Society for Behavioral Neuroendocrinology*. Pacific Grove, CA. June 2015.

Lonstein, JS, **Holschbach, MA**, Grieb, ZA. "Maternal and litter factors interact to influence postpartum caregiving, anxiety, and midbrain tryptophan hydroxylase 2 expression." *Society for Neuroscience*. Washington D.C. November 2014.

Ragan, CM, **Holschbach, MA**, Lonstein, JS. "Association between brain delta FosB protein expression and maternal experience in female rats." *Society for Neuroscience*. Washington D.C. November 2014.

Holschbach, MA, Grieb, ZA, Lonstein, JS. "Postpartum stage and litter age interact to affect postpartum socioemotional behaviors and midbrain tryptophan hydroxylase 2 expression." *Society for Behavioral Neuroendocrinology*. Sydney, Australia. August 2014.

Ragan, CM, **Holschbach, MA**, Lonstein, JS. "Differential expression of Fos-family proteins in maternal and nonmaternal brain." *Society for Behavioral Neuroendocrinology*. Sydney, Australia. August 2014.

Holschbach, MA, Lonstein, JS. "Reproduction and maternal experience alter neuroplasticity in the midbrain dorsal raphe." *International Behavioral Neuroscience Society*. Las Vegas, Nevada. June 2014.

Ragan, CM, **Holschbach, MA**, Lonstein, JS. "Differential expression of Fos-family proteins in maternal and nonmaternal brain." *International Behavioral Neuroscience Society*. Las Vegas, Nevada. June 2014.

Holschbach, MA, Lonstein, JS. "Effects of reproductive experience on cell proliferation and survival in the midbrain of adult, female rats." *Society for Neuroscience*. New Orleans, Louisiana. Oct 2012.

Holschbach, MA, Lonstein, JS. "Cell proliferation/survival in the dorsal raphe across reproductive states in female rats." *Society for Behavioral Neuroendocrinology*. Madison, WI. June 2012.

Holschbach, MA, Lonstein, JS. "Diminished norepinephrine release in the BSTv decreases anxiety but does not promote maternal behavior in nulliparous female rats." *Society for Neuroscience*. Washington DC. Nov 2011.

Holschbach, MA, Lonstein, JS. "Cell proliferation in the dorsal raphe of pregnant and lactating rats." *Workshop on Prosocial Behavior*. Atlanta, Georgia. Oct 2011.

Memberships in Professional Societies

2017-present Endocrine Society

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| 2015-present | International Workshop for Neuroendocrinology |
| 2013-present | International Behavioral Neuroscience Society |
| 2011-present | Society for Behavioral Neuroendocrinology |
| 2010-present | Society for Neuroscience |