

Marissa Kraynak, PhD

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Education

University of Wisconsin-Madison, Madison, WI **Completed June 2018**
Ph.D. in Endocrinology and Reproductive Physiology
Passed defense June 8, 2018

Drew University, Madison, NJ **2008-2012**
B.A. in Neuroscience

Research Experience

Post-doctoral Research Associate **July 2018-Present**

Research Project:

Implications for Ovarian and Extra-ovarian Estradiol Regulation of Female Sexual Receptivity via ER α in the hypothalamus in the Marmoset Monkey

Research Assistant, Abbott Lab **January 2013- June 2018**

Research Projects:

Implications for Ovarian and Extra-ovarian Estradiol Regulation of Female Sexual Receptivity via ER α in the hypothalamus in the Marmoset Monkey

Discordant Maternal Effects on the Dehydroepiandrosterone to Cortisol Ratio with Mid Versus Late Gestation Initiation of 17-hydroxy-progesterone-caproate in Rhesus Macaque, PI: Dr. David H. Abbott

Estrogen and Progesterone Receptor Involvement in Polycystic Ovary Syndrome Pathogenesis in Female Rhesus Monkey, PI: Dr. Jon E. Levine

Determining Specificity of Estrogen Action on Metabolism and Reproductive Function in Female Marmosets, PI: Dr. David H. Abbott

Publications

Kraynak M, Flowers MT, Shapiro RA, Kapoor A, Levine JE, and Abbott DH. *An Extra-Ovarian Source of Gonadotropin Negative Feedback Revealed by Aromatase Inhibition in Ovariectomized and Ovary Intact Female Marmoset Monkey*, 2017, JEP-Endocrine Metabolism

Kraynak M, Levine JE, and Abbott DH. Insights Gained from Marmoset Endocrine Research. *The Common Marmoset in Captivity and Biomedical Research*. Anticipated publication in November 2018. Editors: Robert Marini, Lynn Wachtman, Suzette Tardif, Keith Mansfield, James Fox. American College of Laboratory Animal Medicine (ACLAM) Series, Elsevier

Kraynak M, Colman RJ, Flowers MT, Abbott DH, and Levine JE. *Ovarian Estradiol Supports Sexual Behavior but not Energy Homeostasis in Female Marmoset Monkey*, Accepted June 2018, International Journal of Obesity.

Kraynak M, Kuhlemann AL, Flowers MT, Levine JE, and Abbott DH. *Female sexual receptivity depends upon extra-ovarian estradiol synthesis in marmoset monkeys*, In preparation.

Selected Presentations

Local

Three Minute Thesis Competition, UW-Madison “*Estrogens and female sex behavior: Is it all in our heads?*” December 2017. Oral Presentation.

WNPRC Neuroscience Working Group, February 2018, “*Implications of ovarian and extra-ovarian estradiol via ER α on the regulation of female sexual receptivity in the marmoset monkey*” Invited Oral Presentation.

Endocrinology and Reproductive Physiology Symposium, June 2016, “*Effect of letrozole on the gonadotropin secretion and androgen excess in ovary intact female marmoset monkeys.*” Oral Presentation.

Endocrinology and Reproductive Physiology Symposium, June 2015, “*Regulation of female sexual behavior in female marmosets housed with well-established male pairmates*” Poster Presentation.

Ob-Gyn Research Day, April 2016, “*Aromatase Inhibition Elevates Post-ovariectomy gonadotropin levels in female marmoset monkeys revealing a non-ovarian source of negative feedback*” Poster Presentation.

Ob-Gyn Department Research Day, May 2017 “*Effect of letrozole on the gonadotropin secretion and androgen excess in ovary intact female marmoset monkeys.*” Poster

Presentation.

National

Oral Presentation. Three Minute Presentations, Selected from Outstanding Abstracts, Endocrine Society Meeting, March 2018, “Hypothalamic ER α gene silencing induces obesity in female rhesus monkeys”

Poster Presentation. Endocrine Society Meeting, June 2014, “*Aromatase inhibition elevates post-ovariectomy gonadotropin levels in female marmoset monkeys revealing a non-ovarian source of negative feedback*” Poster Presentation.

Poster Presentation. Endocrine Society Meeting, April 2016, “*Effect of Letrozole on the gonadotropin secretion and androgen excess in ovary intact female marmoset monkeys*” Poster Presentation.

Poster Presentation. Endocrine Society Meeting, April 2017, “*Extra-Ovarian Estradiol Contributes to Juvenile Restraint of Gonadotropin Secretion in Female Rhesus Monkeys*”

Poster Presentation. Society for Maternal-Fetal Medicine, April 2014 “*Discordant maternal effect on the DHEA/Cortisol ratio with mid versus late gestation initiation of 17OHPc in rhesus macaques*”

Poster Presentation. Society for Behavioral Neuroendocrinology. June 2017 “*Implications for ER α Role in Goal-Oriented Behaviors, but not Female Sexual Receptivity in the Female Marmoset Monkey*”

Poster Presentation. Endocrine Society Meeting, March 2018. “*Ovarian Estradiol Supports Sexual Behavior but not Energy Homeostasis in Female Marmoset Monkey*”

Poster Presentation. Levine JE, **Kraynak M**, Flowers MT, and Abbott DH. Endocrine Society Meeting, March 2018. “*Hypothalamic ER α gene silencing induces obesity in female rhesus monkeys*”

Poster Presentation. Kraynak M, Kuehlmann AL, Flowers MT, Levine JE, and Abbott DH. International Congress of Neuroendocrinology Meeting, July 2018. “*Female sexual receptivity depends upon extra-ovarian estradiol synthesis in marmoset monkeys.*”

Fellowships, Honors, and Awards

Ronald K. Meyer, PhD Graduate Trainee Award, University of Wisconsin-Madison, Ob-Gyn Department. Awarded June 2018.

Eunice Kennedy Shriver National Institute for Child Health and Human Development, NICHD, Pre-Doctoral Trainee Award, University of Wisconsin-Madison Ob-Gyn department, T32-HD041921. Principal Investigator: Dr. Ian M. Bird, Ph.D., awarded July 2016 and renewed July 2017

- Received grant for research and scientific engagement excellence

Training, Education, and Mentoring in Science (TEAM-Science) Scholar R25, University of Wisconsin-Madison, the Center for Women's Health and Research, NIH R25 GM083252. Principal Investigator: Dr. Molly Carnes, M.D. Awarded Summer 2013

- NIH funded initiative to increase the success of promising underrepresented ethnic/racial students and students with disabilities in STEM PhD programs

Mentoring Undergraduates in Research, Scholarly and Creative Activities Award from the Office of the Provost and Vice Chancellor of Academic Affairs, University of Wisconsin-Madison, Awarded April 2016

- Received campus-wide award for excellence in mentoring undergraduates typically given to faculty members, but on rare occasions graduate students, that demonstrate mentoring programs that are beyond expectations

UW-Madison Student Research Travel Grant, Endocrine Society Meeting, Awarded June 2016

Outstanding Oral Presentation Award, Endocrinology and Reproductive Physiology Annual Research Symposium, awarded June 2016

Writing Across the Curriculum TA Fellow, Invited to design and implement TA training, Awarded August 2016

- Selected from all science TA's at University of Wisconsin-Madison for excellent record of teaching scientific writing to undergraduate students

Leadership Experience

Emerge Wisconsin (state chapter of EmERGE America, a national organization), 2017

- Organization focuses on the representation of women in local politics
- Selected for a six-month training program focusing on educating and empowering women to run for public office.
- Cultivated a network within WI legislature

Wisconsin Women's Network Policy Institute, March 2018

- Attended a weekend-long training program focused on:

- Wisconsin Legislative Process
- Leadership
- Policy Advocacy
- Communications
- Networking

Wisconsin National Primate Research Center (WNPRC) 2016-Present

Safety and Compliance Committee

- Participate in implementing and revising emergency and non-emergency safety regulations for the WNPRC

Endocrinology and Reproductive Physiology (ERP) Leadership

Seminar Committee, 2013-Present

- Selected by graduate program director to plan professional development opportunities, weekly seminars and program retreats for ERP graduate students

Symposium Planning Committee, 2013-Present

- Selected as a member by graduate program director
- Planned yearly research symposium
 - Selected outstanding abstracts for oral presentations
 - Planned a national conference-like atmosphere for scientific communication skills practice
 - Selected and coordinated keynote speakers

Recruitment Committee, 2015-2017

- Selected as a member by program coordinator
- Engaged in local and national recruitment efforts
 - Attended career day events for UW-Madison
 - Participated in the interview process for my graduate program
 - Set up recruitment efforts for networking with undergraduates and their mentors attending Endocrine Society Meeting and Society for Behavioral Neuroendocrinology Meetings

Teaching and Mentoring Experience

Undergraduate Mentoring, 2013-2018

- Mentored and trained 15 undergraduate students through various long- and short-term independent research projects
- Developed and coordinated weekly student led research seminars
- Developed curriculum to engage mentees in science communication through written and oral presentations
- Trained students in laboratory techniques and responsible conduct of research

Teaching Assistant, Pilot Project - Case Based Learning, Spring 2016

- Selected to lead an innovative new course that shifted traditional lecture based learning style to case based learning

- Collaborated weekly with professors to develop cases that were used to teach biological concepts
- Lead students through using peer-reviewed research and public information to solve the biological issues within each case
- Designed scientific writing curriculum for this course

Teaching Assistant, Discussion Section, Zoology Department, Spring 2013

- Taught Introductory Biology, five sections/week, 65 students total
- Prepared discussions based off lecture material, graded, and led small group discussions

Teaching Assistant, Laboratory, Zoology Department, Fall 2015

- Taught Introductory Biology, three 90-minute laboratory sections/week, 60 students total
- Planned and organized multiple weekly laboratory experiments
- Guided students through experimental design, hypothesis generation, data collection, and scientific writing

Community Involvement and Volunteer Work

Seminar Leader for Pilot Course: Broader Impacts in Science, Spring 2016

- Graduate course team leader for a new semester-long seminar class on science education and public engagement about animal research. The course was developed by Americans for Medical Progress Michael D. Hayre Fellow Audrey Buelo. The course included lectures and discussion on core principles in animal research ethics, philosophy, and animal welfare; public knowledge and attitudes about animal research; overview of the regulatory system, policy issues, and political campaigns relevant to research; psychological science applied to understanding attitude formation and behavioral change; traditional and social media; and critical review of existing programs designed to provide public education and opportunities for dialogue.
- Provided expertise and feedback to students developing unique proposals for outreach programs
- Contributed to Speaking of Research blog post promoting success and value of the course
 - o Co-authored article titled “Back to School: Graduate Students learn about animal research and outreach”

Executive Board, Wisconsin Women’s Rugby Football Club, June 2014- August 2016

- Elected to Social Chair Position for 2-terms.
- Planned fundraisers, organized post game social events and annual awards banquets
- Held position through two runs at Women’s Rugby Nationals (2015, team was national champs; 2016, team was 2nd place nationally)
- Competitively played on the team 2013-2016

City of Cottage Grove, Chamber of Commerce, 2014-2016

- Traffic control volunteer for annual holiday parade
- Annual food drive volunteer
- Assisted fundraising events for local lions’ club

Cottage Grove Sports Complex, 2013-2016

- Field maintenance worker
- Volunteered for concessions, ticketing, and clean up for local rugby and hurling tournaments

WNPRC Animal Research Outreach, Spring 2013-Present

- Designed and implemented successful outreach events for diverse communities
- Designed competitive events for Wisconsin Science Olympiad

Emerge Wisconsin, 2017-present

- Volunteered annual charity gala fundraiser
- Assisted at recent training sessions
- Served on various campaigns for women running for Dane County local offices