

Curriculum Vitae

Amanda G. Gibson

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EDUCATION

UNIVERSITY OF MICHIGAN, <i>Ann Arbor, MI</i>	PHD: AUGUST 2024
Neuroscience Graduate Program	MASTER OF SCIENCE: APRIL 2023
HOPE COLLEGE, <i>Holland, MI</i>	MAY 2018
B.A. in Psychology and Spanish	Minor in Neuroscience and Chemistry

INSTRUCTIONAL EXPERIENCE

ASSOCIATE PROFESSOR OF PSYCHOLOGY AND NEUROSCIENCE	FALL 2024-PRESENT
<i>Regis University, Denver, CO</i>	
PART-TIME FACULTY OF LIFE SCIENCES	FALL 2023
<i>Washtenaw Community College, Ann Arbor, MI</i>	
GRADUATE STUDENT INSTRUCTOR	2020
<i>University of Michigan, Ann Arbor, MI</i>	
UNDERGRADUATE TEACHING ASSISTANT	2016-2018
<i>Hope College, Holland, MI</i>	

CERTIFICATES

GRADUATE TEACHER CERTIFICATE PROGRAM	MAY 2024
<i>Center for Research on Learning and Teaching, Ann Arbor, MI</i>	
PREPARING FUTURE FACULTY	JUNE 2023
<i>Center for Research on Learning and Teaching & Rackham Graduate School, Ann Arbor, MI</i>	

TEACHING AWARDS

OUTSTANDING GRADUATE STUDENT INSTRUCTOR AWARD	WINTER 2023
<i>Rackham Graduate School, University of Michigan, Ann Arbor, MI</i>	
<ul style="list-style-type: none"> • Nominated by the Neuroscience Graduate Program • Recognizes the efforts and accomplishments of GSIs who demonstrate extraordinary dedication and excellence as teachers • Competitively selected from nominations of graduate students across the university 	
EXCELLENCE IN TEACHING AWARD	WINTER 2022
<i>Office of Graduate & Postdoctoral Studies, University of Michigan, Ann Arbor, MI</i>	
<ul style="list-style-type: none"> • Nominated by the Neuroscience Graduate Program • Competitively selected for commitment to creating an effective learning environment, overcoming remote learning roadblocks, and developing student potential 	
ARTHUR J. VANDER OUTSTANDING GRADUATE STUDENT TEACHING AWARD	FALL 2020
<i>Molecular & Integrative Physiology, University of Michigan, Ann Arbor, MI</i>	
<ul style="list-style-type: none"> • Awarded to a graduate student who taught in the Physiology 201 course and who had an outstanding approach to teaching 	

EDUCATIONAL DESIGN EXPERIENCE

GRADUATE STUDENT INSTRUCTIONAL CONSULTANT

FALL 2021-FALL 2023

Center for Research on Learning and Teaching (CRLT), University of Michigan, Ann Arbor, MI

Supervisors: Drs. Karishma Collette, Esther Grace Witte, and Anoff Nicholas Cobblah

- Support teaching excellence across the campus and participate in a community of practice with other educational developers
- Conduct individual consultations and classroom observations with graduate student instructors, addressing topics such as student engagement and equity-focused teaching
- Facilitate midterm student feedback sessions and summarize feedback in a written report with recommendations and resources for instructors
- Review and provide feedback on teaching philosophy statements

INSTRUCTIONAL AIDE

FALL 2020

Neuroscience Graduate Program, University of Michigan, Ann Arbor, MI

- Prepared and curated resources to assist course directors in implementing effective instructional practices for a remote and hybrid semester
- Grounded recommendations in educational theory and evidence-based practices disseminated at workshops facilitated by CRLT and the Center for Academic Innovation

CO-FACILITATOR FOR SIREN & NURO WORKSHOPS

SUMMER 2020

Neuroscience Graduate Program, University of Michigan, Ann Arbor, MI

Co-facilitators: Drs. Keith Duncan and Audrey Seasholtz

- Summer undergraduate research programs Summer Intensive Research Experience in Neuroscience (SIREN) and Neuroscience Undergraduate Research Opportunity (NURO) canceled their in-person research components due to the COVID pandemic
- Designed and implemented a twice-weekly, virtual, professional development curriculum to prepare these rising undergraduate senior students for fellowship and graduate applications
 - Three of ten participants are now Neuroscience PhD Candidates at UM, with many others successfully pursuing other graduate education
- Workshops helped students build an identity in science, define their personal mission, and align career decisions with their values
- Materials at sites.google.com/umich.edu/siren-nuro-2020-example

PUBLICATIONS

Gibson AG, Moenter SM. **Early-Life Resource Scarcity in Mice Does Not Alter Adult**

Corticosterone or Preovulatory Luteinizing Hormone Surge Responses to Acute Psychosocial

Stress. *eNeuro*. 2024 July 15; 11(7): ENEURO.0125-24.2024. doi: 10.1523/ENEURO.0125-24.2024.

PMID: 39009448 PMCID: PMC11287788

Gibson AG, Jaime J, Burger LL, Moenter SM. **Prenatal Androgen Treatment Does Not Alter the**

Firing Activity of Hypothalamic Arcuate Kisspeptin Neurons in Female Mice. *eNeuro*. 2021

Sep 29; 8(5): ENEURO.0306-21.2021. doi: 10.1523/ENEURO.0306-21.2021. PMID: 34503965;

PMCID: PMC8482853.

EXTRAMURAL FELLOWSHIPS

NATIONAL RESEARCH SERVICE AWARD (NRSA, F31)

2022-2024

Eunice Kennedy Shriver National Institute of Child Health & Human Development,

National Institutes of Health

- Project title: Modulation of the neuroendocrine control of reproduction by early-life and adult stress and their interactions
- Award Number: 1F31HD108872

RESEARCH EXPERIENCE

CHARACTERIZATION OF THE EFFECTS OF EARLY-LIFE MANIPULATIONS ON HYPOTHALAMIC-PITUITARY-ADRENAL AND -GONADAL AXES FUNCTIONS

WINTER 2019-JULY 2024

University of Michigan, Ann Arbor, MI

- Investigation of effects of early-life and adult, layered, psychosocial stress paradigms on hypothalamic-pituitary-gonadal axis *via* electrophysiology in hypothalamic brain slices
- Contribution to IgorPro coding projects for the analysis of electrophysiological data
- Development of HTML and JavaScript forms for standardization of data collection and management with the use of LabArchives, an electronic research notebook
- Creation of data visualization and analysis workflow in R and RShiny
- **Dissertation Advisor:** Dr. Suzanne Moenter
- **Dissertation Committee**
 - Co-chairs: Drs. Suzanne Moenter and Audrey Seasholtz
 - Members: Drs. Joanna Spencer-Segal, Kevin Jones, and Christian Burgess

DISRUPTION OF RECONSOLIDATION OF CONDITIONED THREAT MEMORIES IN RATS BY ELECTROCONVULSIVE SHOCK

SUMMER 2019

University of Michigan, Ann Arbor, MI

- Examined the impact of a single electroconvulsive shock on the reconsolidation of a previously conditioned auditory fear memory using behavioral assay
- Assessed alterations in network connectivity *via* whole-brain cFos immunohistochemistry
- **Rotation Mentor:** Dr. Jacek Debiec

REGULATION OF EXOCYTOSIS FROM ADRENAL CHROMAFFIN CELLS

FALL 2018

University of Michigan, Ann Arbor, MI

- Utilized total internal reflection fluorescence microscopy to assess characteristics of exocytosis in adrenal chromaffin cells following stimulation by acetylcholine and PACAP
- **Rotation Mentor:** Dr. Arun Anantharam

INVESTIGATION OF THE EFFECTS OF HIGH-FAT DIET ON CIRCADIAN RHYTHMS IN A DIURNAL RODENT, THE NILE GRASS RAT

2017-2018

Hope College, Holland, MI

- Conducted behavioral analysis to measure consequences of a high-fat diet on circadian profile and the prefrontal cortex
- **Mentors:** Drs. Andrew Gall and Peter Vollbrecht

SYSTEM X_c⁻ REGULATION: EFFECTS OF MUTATIONS ON MEMBRANE EXPRESSION

2016-2018

Hope College, Holland, MI

- Used site-directed mutagenesis to create novel mutants of a membrane transport system
- Assessed the effects on transport activity, ubiquitination status, and cell surface localization
- **Mentor:** Dr. Leah Chase

EVALUATION OF A PRESCHOOL, NATURE-BASED ENRICHMENT PROGRAM

2015-2018

Hope College, Holland, MI

- In collaboration with the Outdoor Discovery Center Macatawa Greenway
- Assessed the impact of nature-based interventions for preschool students
- Conducted interviews with students to assess activity preferences and evaluated developmental markers *via* parent- and teacher-administered Ages and Stages Questionnaire
- **Mentor:** Dr. Sonja Trent-Brown

MENTORSHIP

JESSE LANGE – UNDERGRADUATE STUDENT

2021-2023

University of Michigan, Ann Arbor, MI

- Honors thesis studying activation of corticotropin-releasing hormone neurons during adult stress in female mice

BO DONG – UNDERGRADUATE STUDENT

2021-2022

University of Michigan, Ann Arbor, MI

- Development of oral corticosterone feeding protocol to mimic serum corticosterone levels during acute adult stress in female mice

ADDITIONAL SCHOLARSHIPS AND AWARDS

NEUROSCIENCE GRADUATE PROGRAM TRAVEL AWARD

WINTER 2023

Neuroscience Graduate Program, University of Michigan, Ann Arbor, MI

RACKHAM INTERNATIONAL TRAVEL AWARD

SUMMER 2022

Rackham Graduate School, University of Michigan, Ann Arbor, MI

RACKHAM GRADUATE STUDENT RESEARCH GRANT, CANDIDATE

SUMMER 2022

Rackham Graduate School, University of Michigan, Ann Arbor, MI

EXCELLENCE IN BASIC SCIENCE AWARD

2019-2024

Endowment for Basic Science, Neuroscience Graduate Program, University of Michigan, Ann Arbor, MI

RACKHAM GRADUATE STUDENT RESEARCH GRANT, PRE-CANDIDATE

FALL 2019

Rackham Graduate School, University of Michigan, Ann Arbor, MI

BERNARD MAAS FELLOWSHIP

FALL 2018

University of Michigan, Ann Arbor, MI

SOUTHLAND AWARD

APRIL 2018

Hope College, Holland, MI

- Presented to senior woman who exemplifies the highest standard of scholarship, character, and contributions during the four years of her college career

HOWARD HUGHES MEDICAL INSTITUTE RESEARCH SCHOLAR

SUMMER 2016

Hope College, Holland, MI

- Strengthening the Pathway to STEM Research Leadership at Hope College

TRUSTEE SCHOLARSHIP

2014-2018

Hope College, Holland, MI

ORAL PRESENTATIONS

Gibson, A.G. (2023, July). *Effects of early-life and adult stress on the preovulatory LH surge*. Invited presentation at the Instituto Maimónides de Investigación Biomédica de Córdoba, Córdoba, Spain

Gibson, A.G. (2022, September). *Effects of early-life and adult stress on the preovulatory LH surge*. Neuroscience Graduate Program Retreat, University of Michigan, Ann Arbor, MI

Gibson, A. G., Lurvey, K., Gonzalez, T., & Trent-Brown, S. (2016, August). *Implications of a Nature-Based Science Enrichment Program for Early Literacy and Cognitive Development Outcomes*. Research roundtable presentation at the 2016 Nature-Based Preschool National Conference, St. Paul, MN.

Flachier, S. R., Bradtke, J., Gibson, A. G., Hawkins, N., & Musson, S. (2013, October). *Mattawan High School Peer Assistant Leaders: Reaching out to high school students*. Presented at Southwest Michigan Eating Disorders Association conference, Eating Disorders Management: Improving the Systems of Care in Your Community

POSTER PRESENTATIONS

- Gibson, A.G., Moenter, S.M. (2024, June). *Early-life stress in mice did not alter reproductive maturation, estrous cycles, or the response to an adult stress that disrupts the LH surge*. Poster presentation at the annual meeting for the Society for Behavioral Neuroendocrinology, Columbus, Ohio
- Gibson, A.G., Wagenmaker, E.R., Dong, B., Moenter, S.M. (2023, June). *Acute stress that disrupts the LH surge does not alter excitatory input to GnRH neurons and cannot be recapitulated by corticosterone*. Poster presented at the annual meeting for the Society for Behavioral Neuroendocrinology, Tours, France
- Gibson, A.G., Moenter, S.M. *Does early-life stress alter disruption of the luteinizing hormone (LH) surge by acute stress in adults?* Poster presentations at
- International Congress of Neuroendocrinology meeting, Glasgow, Scotland (2022, August)
 - National Defense Science and Engineering Graduate Fellows Conference, Boston, MA (2022, July)
 - 3rd Annual Michigan Neuroscience Conference, University of Michigan, Ann Arbor, MI (2022, May)
- Gibson, A.G., Moenter, S.M. (2021, November). *Early-life stress may delay puberty in both sexes and alter corticosterone response to acute stress in males*. Poster presentation at the virtual 50th Annual Meeting for the Society for Neuroscience.
- Gibson, A.G., Jaime, J., Moenter, S.M. (2021, June). *Prenatal androgen treatment does not alter the firing activity of arcuate kisspeptin neurons*. Poster presentation at the virtual annual meeting for the Society for Behavioral Neuroendocrinology
- An, X., Gibson, A.G., White, A., Savard, B., Debiec, J. (2019, October). *Disruption of reconsolidation of conditioned threat memories in rats by electroconvulsive shock*. Poster presentation at the 49th Annual Meeting for the Society for Neuroscience, Chicago, IL.
- Gibson, A. G., Isett, J., Royer, J. Vela, N., Vollbrecht, P., & Gall, A. (2018, May). *High-Fat Diet Impairs Circadian Rhythmicity in a Diurnal Rodent Model Without Affecting Cognition*. Poster presentation at the 49th Annual Meeting for the Michigan Chapter of the Society for Neuroscience, Wayne State University, Detroit, MI.
- Gibson, A., Isett, J., Royer, J., Vela, N., Vollbrecht, P., & Gall, A. (2018, April). *Effects of High Fat Diet Consumption on Circadian Rhythms and Cognition in Nile Grass Rats*. Poster presentation at the 90th Annual Meeting of the Midwestern Psychological Association, Psi Chi Program, Chicago, IL.
- Gibson, A., Lurvey, K., Prokott, T., Guzman, A., & Trent-Brown, S. (2018, April). *Outside, now! Parental Practices Shape Their Children's Activity Preferences and Behaviors*. Poster presentation at the 90th Annual Meeting of the Midwestern Psychological Association, Psi Chi Program, Chicago, IL.
- Gibson, A. G., Versluis, P., Schmidt, M., & Chase, L. (2017, November). *Regulation of System xc: Effects of N-terminal and C-terminal mutations on xCT cell surface expression*. Poster presentation at the 47th Annual Meeting for the Society for Neuroscience, Washington, DC.
- Gibson, A. G. (2016, November). *Effects of mutations on membrane expression and ubiquitination status on System xc- regulation*. Poster session presentation at Undergraduate Research Symposium in the Biological Sciences & Psychology, Midstates Consortium for Math & Science, University of Chicago, Chicago, IL.
- Gibson, A. G., Prokott, T., Bergt, G., Boyle, L., Dufek, K., Mendoza, E., Miller, L., Schipper, C., Shintani, M., Zhang, T., & Trent-Brown, S. (2016, May). *Exploring Technology Usage and Leisure Activities from Childhood to Emerging Adulthood*. Poster session presentation at the 88th Annual Meeting of the Midwestern Psychological Association, Psi Chi Program, Chicago, IL.
- Schipper, C., Shintani, M., Prokott, T., Gibson, A. G., Bergt, G., Boyle, L., Dufek, K., Mendoza, E., Miller, L., Zhang, T., & Trent-Brown, S. (2016, May) *Activity Preference and BMI as Developmental Indicators for Preschoolers*. Poster session presentation at the 88th Annual Meeting of the Midwestern Psychological Association, Psi Chi Program, Chicago, IL.

WORKSHOP FACILITATION

CINDERELLA AS THE SCIENTIFIC METHOD

AUGUST 2023

Neuroscience Graduate Program, University of Michigan, Ann Arbor, MI

- Led introductory session for first-year graduate students on the scientific method
- Students individually brainstormed the steps of the scientific method, worked in small groups to fill in the gaps, and shared with the large group to build a consensus process
- Cinderella was used as an example scenario to identify aspects of the scientific method
- Students reflected on experiments conducted during intensive preparatory molecular neuroscience course to recognize steps of the scientific method

JUDGING BY THE COVER (LETTER): SPEED FEEDBACK FOR PROFESSIONAL MATERIALS JUNE 2023

Society for Behavioral Neuroendocrinology, Professional Development Workshop, Tours, France

- Facilitated session in which more experienced society members conducted a speed review of professional materials, such as cover letters or grants, for early-stage career society members
- Participants received feedback on the initial and overarching impressions of their materials, with suggestions and strategies for how to move forward and revise the documents

SIREN-NURO BOOTCAMP: LAB FUNDAMENTAL SKILLS DEVELOPMENT

JUNE 2023

Neuroscience Graduate Program, University of Michigan, Ann Arbor, MI

- Initial orientation for incoming undergraduate summer research students
- Bootcamp focused on building transferable professional skills, and giving students practical training in lab fundamentals, critical thinking, and principles of neuroscience research
- In consultation with SIREN & NURO program leadership and other graduate students, designed and led stations on **indirect immunofluorescence** and **standard curves**
 - Students manipulated paper schematics of antibodies and antigens to learn how to match antigen targets and host species for primary and secondary antibodies
 - Students created a bovine serum albumin (BSA) standard curve and learned how to run and analyze the results of a bicinchoninic acid (BCA) protein assay

LEADERSHIP AND SERVICE

NEUROSCIENCE GRADUATE PROGRAM CURRICULUM COMMITTEE MEMBER

2022-2023

University of Michigan, Ann Arbor, MI

- Synthesized student course evaluations into a report with recommendations for improving the learning environment in program-required courses
- Curated a resource guide for course directors that included a template NGP syllabus, recommendations for creating course objectives and guidelines for interaction, active learning strategies, and teaching for equity
- Redesigned preliminary exam process and developed rubrics to define student expectations

NEUROSCIENCE GRADUATE PROGRAM DEI TASK FORCE MEMBER

2020-2021

University of Michigan, Ann Arbor, MI

BRAINSRULE!

University of Michigan, Ann Arbor, MI

- President** 2020-2024
- Vice President** 2019-2020
- Educational Development Team** 2018-2019
- Student-led group that organizes a day-long community event designed to teach local middle-school students about the brain and behavior

NEUROSCIENCE GRADUATE PROGRAM RETREAT PLANNING COMMITTEE CO-CHAIR 2018-2019

University of Michigan, Ann Arbor, MI

COMMUNITY ENGAGEMENT

SCIENCE EDUCATION & ENGAGEMENT FOR KIDS (SEEK) PHYSIOLOGY FUN DAY VOLUNTEER

University of Michigan, Ann Arbor, MI

APRIL 2019, MARCH 2022

BRAIN AWARENESS WEEK VOLUNTEER

MARCH 2018

Hope College, Holland, MI

- Presented at local elementary and middle schools with aim of increasing understanding of the central and peripheral nervous systems

BRAIN DAY OPEN HOUSE VOLUNTEER

MARCH 2018

Hope College, Holland, MI

- Led a hands-on booth exploring neuroanatomy at community event reaching over 200 kids

BRAINS, BUGS, AND BIOLOGY VOLUNTEER

JULY 2017

Ottawa County Fair, Holland Michigan

- Assisted with booth led by Hope College Biology Department to engage children and families with biological concepts, including neuroanatomy and sensory systems

VOLUNTEER MIDDLE SCHOOL CHURCH CAMP COUNSELOR

2014, 2018

Wesley Woods Camp & Retreat Center

LANGUAGE COMPETENCY

SPANISH

IES Abroad Madrid: Language and Area Studies; Foreign Study

WINTER 2017

Advanced Performance

FALL 2018

- American Council on the Teaching of Foreign Languages (ACTFL) Assessment of Performance towards Proficiency in Languages (AAPPL)

PROFESSIONAL AFFILIATIONS

American Physiological Society

2023

Faculty for Undergraduate Neuroscience

2022

Pan American Neuroendocrine Society

2022

American Association of Colleges and Universities

2022

Society for Behavioral Neuroendocrinology

2021-2023

Society for Neuroscience & Michigan Chapter of the Society for Neuroscience

2018-2021

Phi Beta Kappa Society

Winter 2018

Sigma Delta Pi, National Collegiate Hispanic Honor Society

Winter 2018

Psi Chi, International Honor Society in Psychology

Fall 2015

WORK EXPERIENCES

RESIDENTIAL ASSISTANT

FALL 2015-FALL 2016

Hope College, Holland, MI

- Resident Director: Allison Schantz (Fall 2015-Spring 2016)
- Assistant Director, Residential Life and Education: Mark Brice (Fall 2016)

PSYCHOLOGY INTERN

SUMMER 2015

Southwest Michigan Children's Trauma Assessment Center, Kalamazoo, MI

- Mentor: Cara Weiler, LMSW

TRAININGS

QUESTION, PERSUADE, RESPOND SUICIDE PREVENTION PROGRAM **FALL 2015, 2016**
Residential Life Training, Hope College, Holland, MI

CRITICAL INCIDENT STRESS MANAGEMENT **SPRING 2012**
Peer Assistant Leader Program, Mattawan High School, Mattawan, MI

THE GATEKEEPER SUICIDE PREVENTION PROGRAM **SPRING 2012**
Gryphon Place presentation to Peer Assistant Leader Program, Mattawan High School, Mattawan, MI

TECHNICAL EXPERTISE

Electronic Lab Notebook LabArchives

Learning Management Systems Canvas
 Blackboard

Digital Meeting Platforms Zoom
 Microsoft Teams

Computer Programming R
 IgorPro
 HTML
 JavaScript & jQuery

Statistics GraphPad Prism
 IBM SPSS

Laboratory Techniques Electrophysiology, *ex vivo*
 Loose-patch, targeted extracellular recordings
 Whole-cell voltage- and current-clamp recordings
 Optogenetic manipulation
 Enzyme immunoassay
 Immunofluorescence of tissue sections
 Mouse colony maintenance
 Rodent behavior assays
 Mammalian cell culture maintenance and transfection
 PCR-based site-directed mutagenesis
 Isolation of membrane proteins using cell-surface biotinylation
 SDS-PAGE/Western blot analysis
 Histidine-based pull-down assays
 Radioactivity uptake assay in cultured mammalian cells

Graphics Adobe Illustrator

Productivity Software Microsoft Office: Word, PowerPoint, Excel, OneNote, Outlook