**Megan L. Sieg**

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**RESEARCH INTERESTS**

Neurotoxicology, neuroendocrinology, developmental neuroscience, behavioral neuroscience, cognitive neuroscience, epidemiology, psychopharmacology

**EDUCATION**

**PhD in Neuroscience Expected 2021**

University of Illinois at Urbana-Champaign

**BS in Biology & BA in Psychology, *summa cum laude*** **2014**

Northern Illinois University, DeKalb, Illinois

**TEACHING AND MENTORING**

**University of Illinois Graduate College Summer 2017, 2018**

*Summer Research Opportunities Program Research Team Leader*

* Guided a group of advanced undergraduate students from underrepresented groups in the life sciences through the eight-week program of learning what it would be like for them to pursue graduate studies at Illinois
* Assisted students in writing a proposal at the beginning of the program and a research paper at the end of the program
* Helped students prepare to present their work at the Illinois Summer Research Symposium
* Judged poster and oral presentations at the Illinois Summer Research Symposium for awards

**Eubig-Mahoney Lab Collaboration Jan 2017 – Dec 2017**

*Undergraduate Coordinator*

* Led planning and organizing weekly lab meetings
* Communicated with undergraduate lab members about lab work
* Organized Brain Awareness Day booths for both labs

**Teaching Assistant Spring 2016, Fall 2017**

*Department of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign*

* MCB 151: Molecular and Cellular Biology Laboratory
	+ Spring 2016
	+ Taught an introductory biology laboratory section for non-majors
	+ Planned lessons, graded lab reports, and held office hours to help students
	+ Overall teaching effectiveness ranked in the top 10% of the department and university
* MCB 245: Human Anatomy and Physiology Laboratory
	+ Fall 2017
	+ Guided students in learning the basics of human anatomy and physiology
	+ Planned lessons, graded lab exams, proctored exams for both the lab and its associated lecture, and held office hours to help students
	+ Overall teaching effectiveness ranked in the top 5% of the department and university

**Mentor 2014 – 2015**

*Mentor Matching Engine*

* Advised high school students working on science projects
* Connected with high school science teachers and discussed speaking to their students about being a woman in science

**RESEARCH EXPERIENCE**

**Graduate Research Assistant Jan 2018 – Present**

*Illinois Kids Development Study, Schantz Lab*

*Neuroscience Program, University of Illinois at Urbana-Champaign*

**Graduate Research Assistant Aug 2015 – December 2017**

*Eubig Lab*

*Neuroscience Program, University of Illinois at Urbana-Champaign*

* Designed and implemented the novel object recognition paradigm for a project collaboration with Dr. Mary Gilbert of the Environmental Protection Agency studying the effects of maternal thyroid hormone insufficiency during the perinatal period on offspring learning and memory in a rodent

model of maternal subclinical hypothyroidism

* Examined the effects of developmental exposure to methamphetamine on attention and impulsive behavior in the 5-chocie serial reaction time task and delay-discounting task; also studied the effects of administration of dopaminergic drugs on behavior in the 5-choice serial reaction time task in

these animals in collaboration with Drs. Chip Vorhees and Michael Williams of the Cincinnati Children’s Hospital

* Collaborating with Dr. Megan Mahoney to study the effects of circadian disruption on impulsive behavior in the 5-choice serial reaction time task and the neurochemical mechanisms of acetylcholine and dopamine in the behavioral effects of circadian disruption

**Research Lab Volunteer Fall 2014**

*Wallace Lab*

*Department of Psychology, Northern Illinois University*

* Finished the independent research project studying the effects of cholinergic deafferentation in an odor discrimination task
* Sectioned and stained brain slices for immunohistochemical analysis
* Helped with other projects as needed

**Summer Research Opportunities Program Summer 2014**

*Wallace Lab*

*Department of Psychology, Northern Illinois University*

* Directed an independent research project studying the effects of cholinergic deafferentation in an odor discrimination task
* Performed stereotaxic surgeries to induce lesions in the hippocampus
* Taught other undergraduates to run the behavioral task
* Coded and analyzed data
* Presented preliminary findings at the research symposium in an oral presentation at the end of the program

**Independent Study 2013 – 2014**

*Wallace Lab*

*Department of Psychology, Northern Illinois University*

* Studied animal behavior and neuroscience under the direction of Dr. Doug Wallace and Dr. Jenny Köppen
* Ran behavioral task to analyze the ability of rats to learn and recall an odor discrimination task
* Presented findings at two on-campus research conferences.

**Undergraduate Research Apprenticeship Program 2012 – 2014**

*King Lab*

*Department of Biology, Northern Illinois University*

* Worked on research emphasizing behavioral ecology and entomology under the direction of Dr. Bethia King
* Studied the effects of host size and age on the fitness of a parasitoid wasp commonly used to control pest fly populations in agriculture
* Presented findings at two on-campus research conferences.

**PROFESSIONAL MEMBERSHIPS**

Developmental Neurotoxicology Society

American Association for the Advancement of Science

Society for Neuroscience

American Society for Pharmacology and Experimental Therapeutics

**PUBLICATIONS**

Koppen JR, Stuebing SL, **Sieg ML**, Blackwell AA, Blankenship PA, Cheatwood JL, Wallace DG. (2016). Cholinergic

deafferentation of the hippocampus causes non-temporally graded retrograded amnesia in an odor discrimination task. *Behavioural Brain Research*. 299: 97-104

Balachandran R, **Sieg M**, Tran CTQ, Clancy B, Beaudin S, Eubig P. (2018) Cholinergic and dopaminergic

interactions alter attention and response inhibition in Long-Evans rats performing the 5-choice serial response time task. Submitted to *Pharmacology, Biochemistry and Behavior* for publication.

**PRESENTATIONS**

**Sieg ML,** “Maternal hormone insufficiency affects short-term object recognition memory in adult offspring of

Long-Evans rats” (2017, Nov) Poster session presented at the Society for Neuroscience Annual Meeting in Washington, D.C.

**Sieg ML,** “Maternal hormone insufficiency affects short-term object recognition memory in adult offspring of

Long-Evans rats” (2017, Oct) Poster session presented at the University of Illinois Neuroscience Program annual Society for Neuroscience Night

**Sieg ML,** “Maternal hormone insufficiency affects short-term object recognition memory in adult offspring of

Long-Evans rats” (2017, June) Poster session presented at the Developmental Neurotoxicology Society Annual Meeting in Denver, Colorado

**Sieg ML,** “Maternal hormone insufficiency affects short-term object recognition memory in adult offspring of

Long-Evans rats” (2017, Apr) Poster session presented at University of Illinois College of Veterinary Medicine Research Day

**Sieg ML,** “Maternal hormone insufficiency affects short-term object recognition memory in adult offspring of

Long-Evans rats” (2017, Apr) Oral presentation at the Indiana University Animal Behavior Conference in Bloomington, Indiana

**Sieg ML,** “Effects of maternal hormone insufficiency on short-term object recognition memory in adult offspring,”

(2017, Jan) University of Illinois Neuroscience First Year Project Presentations

**Sieg ML**, Townes CA, Balachandran RC, Gilbert ME, Eubig PA, The effects of developmental

hypothyroidism on short-term object recognition memory (2016, March) Poster session presented at the Indiana University Animal Behavior Conference in Bloomington, Indiana

**SERVICE**

**Chapter Advisor Aug 2018 – Present**

*Alpha Omega Epsilon Sorority*

*Mu Chapter at Northern Illinois University*

* Support the Sorority’s mission, Ideals, Objectives, goals, policies, and programs, while knowing the Sorority’s strengths and needs.
* Know and uphold the Sorority’s Bylaws, and Policies and Procedures, and guide its members in the attainment of the Ideals and Objectives of the Sorority
* Attend chapter meetings and events as necessary and at the request of the chapter when possible
* Promote the best interests and welfare of the Sorority as a whole

**Volunteer Coordination Committee Member May 2018 – Present**

*Alpha Omega Epsilon Sorority*

* Interview incoming volunteers to evaluate their strengths, weaknesses, and expertise to match them with a committee to work with
* Interview current volunteers to evaluate their satisfaction with their volunteer experience and determine which committees need additional members
* Work with other committee members to create a database of volunteer information and committee needs
* Aid committees in onboarding and training new volunteers
* Increase volunteer retention rates

**Programming Committee Chair 2016**

*Alpha Omega Epsilon Sorority*

* Held virtual and conference call monthly meetings with committee members
* Organized and facilitated a mentoring program between active sorority members and alumnae
* Planned additional monthly events to engage members with the international organization

**Student Representative 2014-2015**

*NIU Violence Against Women Act Presidential Task Force*

* Discussed and collected information on NIU’s current rules and resources for victims of assault
* Worked with committee to draft a report of recommendations for the University President to consider developing to increase campus safety and resources for students

**Student Aide 2014**

*AAAS Annual Meeting*

* Assisted presenters with the set-up of their presentations
* Kept presenters on time during their presentations
* Provided feedback on the presenters

**Guest Engagement Volunteer 2013**

*John G. Shedd Aquarium*

* Explained exhibits to guests to help them learn more about and engage with the aquatic world
* Helped lead behind the scenes tours.

**Booth Volunteer Annually 2012-14**

*Northern Illinois University STEMFest*

* Helped plan and run an exhibit with interactive science, technology, engineering, and/or math (STEM)-focused activities for all ages

**AWARDS AND HONORS**

**Interdisciplinary Environmental Toxicology Scholar 2018-2020**

*University of Illinois at Urbana-Champaign*

*Interdisciplinary Environmental Toxicology Program*

**Neuroscience Program Travel Grant 2016, 2017**

*University of Illinois at Urbana-Champaign*

**Outstanding Woman Student Award 2014**

*Northern Illinois University*