

Andrew J. C. Hunter

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- Education** **Northwestern Interdepartmental Neuroscience PhD Program (Aug 2019-present)**
Co-Advisors: Jones Parker, Ph.D., Mark Bevan, Ph.D.
Research focuses: Systems Neuroscience – Dopamine Dynamics – Striatal Circuits
- Northwestern University** (Sept. 2014 – June 2018)
B.A. with Honors, Neuroscience, Biology Applied Field
Cum. GPA: 3.74
3rd and 4th year Cum. GPA: 3.82
Principal Investigator & Advisor: Catherine Woolley, Ph.D.
Research Advisor: Nino Tabatadze, Ph.D.
Honors Thesis: Detection of Acute Non-genomic Effects of Estradiol in Mouse Hypothalamic Neurons
- Awards**
- Departmental Honors in Neuroscience* (June 2018)
Department of Neuroscience, Northwestern University
- Dean's List* (Spring 2016 - Spring 2018)
Weinberg College of Arts & Sciences, Northwestern University
- Summer Undergraduate Research Grant Recipient* (May 2017)
Weinberg College of Arts & Sciences, Northwestern University
- Outstanding Omega Leadership Scholarship* (May 2017)
Sigma Chi Fraternity, Omega Chapter
- Presentations**
- Metabolic Profiling of Basal Forebrain Cholinergic Neurons. *Neuroscience PhD Interview Weekend Poster Session*. Feinberg School of Medicine. Chicago, IL, USA Jan 2020. Poster.
- NOFQ Receptor Agonism as a Means to Reduce Opioid-Induced Preference in Rats. *Society for Neuroscience*. Chicago, IL, Nov 2019. Poster.
- Craniofacial Mucosal Application of NOP Agonists for the Treatment and Prevention of Addiction. *Stanford Anesthesiology Department Symposium*. Department of Anesthesiology, Preoperative and Pain Medicine, Stanford University, Stanford, CA, USA. May 2019. Poster.
- Detection and Validation of Aromatase in Hypothalamic Cells. *Neuroscience Undergraduate Summer Research Symposium*, Northwestern University, Evanston, IL, USA, Aug 2017. Presentation.
- Use of a Novel Hydraulic-Based Morris Water Maze Assay to Measure Learning in Long Evans Rats. *Merck Summer Internship Research Day*, Merck & Co., Kenilworth, NJ., USA, Aug 2015. Poster.

**Research
Experience**

Co-Mentored Graduate Student: (Aug 2020 – present)
Department of Psychiatry & Behavioral Sciences, Pharmacology, and Physiology; Feinberg School of Medicine
PI: Jones Parker (PBS, Pharmacology, Physiology) & Mark Bevan (Physiology)
Project: Exploration of the relationship between natural striatal dopamine dynamics and cortical activity using an integrated approach of behavioral techniques, in vivo imaging, genetic manipulation, and ex vivo electrophysiological methods.

Postgraduate Research Assistant (Aug. 2018 – July 2019)
Department of Anesthesiology; Stanford School of Medicine
PI: Professor David Yeomans, Ph.D.
Projects: Designed and led a project to explore use of intra-nasally applied neuropeptide nociceptin to attenuate opioid-induced addictive behavior demonstrated in conditioned place preference in rats.

Undergraduate Research Assistant (January 2017 – June 2018)
Northwestern Neurobiology Department; Northwestern University
PI: Professor Catherine Woolley, Ph.D.
Projects: Designed and executed experiments to detect estrogen-induced non-genomic signaling in personally cultured neuronal cell lines using immunodetection of proteins affected by second messenger pathways associated with 17β -estradiol. Led projects optimizing the detection of CREB, PKA, ERK1/2, and Aromatase using western blot and tested the specificity of commercially available antibodies using RNA interference.

Volunteer Researcher (Aug.- Nov. 2016)
Synapse Proteomics Group; Children's Medical Research Institute, Westmead, NSW, AU
PI: Mark Graham, Ph.D.
Projects: Assisted in research project focused on evaluation of the relationship between site-specific phosphorylation of α -Synuclein and aggregation of α -Synuclein proteins as a prominent feature in the development of Parkinson's Disease. Investigated the relationship between phosphorylation of mutated α -Synuclein proteins and aggregation using SDS and native PAGE and western blot immunodetection.

Volunteer Researcher (Aug. - Nov. 2016)
ADHD Research Team; Westmead Brain Dynamics Centre, Westmead, NSW, AU
Research Advisor: Kristi Griffiths, Ph.D.
Projects: Assisted in clinical EEG testing of patients with ADHD to gather data on age-based differences in behavioral performance and gray matter organization within ADHD patients. Transcribed and digitized performance data into patient profiles for improved management. Assisted in analysis of MRI data with Voxel-Based Morphometry using Statistical Parametric Mapping Software to assess prominent regions of abnormal activity in ADHD and functional neurological symptom disorder patients.

In Vivo Pharmacology Intern (June – Aug. 2015)
In Vivo Pharmacology Department; Merck & CO., Kenilworth, NJ
PI: Lynn Hyde, Ph.D.
Project: Tested the utility of a novel hydraulics-based platform alteration to the Morris Water Maze as a memory task for Long-Evans rats and presented experimental data before professional scientists. Began experimentation into the behavioral effects of 5-HT6 on memory task performance. Developed Excel-based algorithms to simplify transfer of data between incompatible data analysis programs.

Academic Service

President, Northwestern Neuroscience Club (March 2017 - April 2018)

Role: Directed an organization of undergraduate students passionate about the pursuit of Neuroscience in future careers. Coordinated speaking events for leaders in the global field of Neuroscience to inspire and share their knowledge with Northwestern students. Contributed to the Northwestern faculty hiring process for new staff in the Neuroscience department by evaluating candidates in lecture and one-on-one settings with students.

Co-President, Mayfest Productions (June 2017 - June 2018)

Role: Directed the coordination of Dillo Day, the largest entirely student run music festival in the U.S. Responsible for overseeing the budgeting and allocation of \$500,000 to produce a single day music festival at the end of May on Northwestern's Evanston campus for an audience of 12,000+ people. Led 80+ students passionate about music, event production, corporate interactions, finance, marketing, and social promotion and directed both executive and new member boards.

Co-Director of University Relations, Mayfest Productions (July 2016 – June 2017)

Role: Led an internal committee of Mayfest Productions focused on coordinating appropriate safety measures that accompany a large-scale festival environment. Worked closely with Northwestern University administration as well as local administration, police, and fire department officials to decide on protocols and appropriate precautions to ensure a safe and enjoyable atmosphere for Northwestern's annual Dillo Day.

Volunteer, Shirley Ryan Ability Lab, Chicago, IL (Nov 2017 - April 2018)

Role: Assisted those suffering and recovering from debilitating physical conditions by offering emotional support, frequent human interaction, and transportation aid for patients moving to and from rehabilitation therapy sessions.

Volunteer, Stanford Outpatient Neurologic Rehabilitation Program (Oct 2018 - present)

Role: Volunteer aiding in treatment of patients undergoing rehabilitation for neurologically damaging accidents and conditions by assisting doctors and physical therapists leading patients through strengthening behaviors to regain regular function.

Alumni Interviewer, Northwestern Alumni Association (September 2018 - present)

Role: Meet with prospective early decision and regular decision Northwestern Undergraduate applicants from the San Francisco Bay area as a representative of Northwestern Undergraduate Admissions to help determine and assess their fit within the Northwestern Community and aid in their decision-making process.

Personal Interests

Taekwondo: 2nd degree black belt; member of the World Taekwondo Federation; former martial arts instructor for youths age 3-17 specializing in sparring techniques; red belt in Hapkido

Track & Field: Current volunteer pole vault coach for Vertical Assault West Club in Mountain View CA; Northwestern University Track & Field Club member specializing in high jump, 100-400m sprints, and pole vaulting; placed 10th in pole vault at New Balance Emerging Elite US Winter Indoor Nationals 2014; Watchung Hills Team Captain and MVP 2013 and 2014 seasons

Music: Former a'capella group and chorus member; performed "Music of the Night" from Andrew Lloyd Weber's Phantom of the Opera in high school spring concert senior solo; recreationally play acoustic guitar and alto saxophone

Winter Sports: non-competitive double black diamond level skier and snowboarder; previous season-pass holder to Killington, Vermont ski region

Recreational Sports: soccer middle fielder; recreational golfer having played at St. Andrews Links, Scotland and PGA Plantation Course at Kapalua, Hawaii; recreational tennis player and surfer