

Devon Borg

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EDUCATION

University of Florida

Bachelor of Science in Health Science

Minor in Applied Brain Science

Bright Futures Scholarship Recipient

Dean's List (2022 - Present)

AI Scholar

MARC Fellow

College of Public Health and Health Professions Honors Scholar

UF Center for Cognitive Aging and Memory Fellow

Expected May 2026

GPA: 3.68

RESEARCH

UF Center for Cognitive Aging and Memory, Age-Related Memory Loss Program

May 2025-Present

- Advanced research in age related neurodegeneration in synucleinopathies.
- Mentored by faculty in research focused on cognitive decline and memory impairment in aging populations.

UF Maximizing Advanced Research Careers (MARC) GatorSTAR Program

Apr. 2024 - Present

- Engaged in research under the guidance of faculty mentors, contributing to advancements in neuroscience and biomedical sciences.
- Attended seminars, workshops, and conferences focused on career development, scientific communication, and promoting diverse perspectives in research.
- Participated in research presentations, enhancing public speaking and presentation skills within academic and scientific communities.

UF AI Scholars Program

Apr. 2024 - Present

- Contributed to interdisciplinary projects combining artificial intelligence, neuroscience, and medical research.
- Gained hands-on experience in artificial intelligence and machine learning applications in healthcare and biomedical research.
- Networked with AI experts, industry professionals, and researchers.

Khoshbouei Lab at McKnight Brain Institute

Apr. 2023 - Present

- Project title: *Transneuronal Alpha-Synuclein Propagation in the Midbrain induces Dorsal Vagal Complex Pathology*
 - Sectioned mouse brain tissue and conducted immunohistochemistry in preclinical Parkinson's disease models
 - Administered site-specific intracranial viral injections using stereotaxic apparatus
- Project title: *Parkinson's Paradox: Alpha-Synuclein's Selective Strike on SNc Dopamine Neurons over VTA*
 - Sectioned and performed immunolabeling on mouse brain tissue in animal models of Parkinson's disease
 - Performed histological analysis and ran statistical tests using GraphPad Prism
- Project title: *Examining sex differences in dopamine dynamics after methamphetamine exposure*
 - Performed behavioral paradigm, conditioned place preference, a pre-clinical model that examines the rewarding or aversive properties of a stimulus, *in-vivo*
 - Administered site-specific intracranial viral injections using stereotaxic apparatus
 - Surgically implanted GRIN lenses in mice for in vivo calcium imaging studies
- Managed and coordinated animal colony genotyping.
- Coordinated undergraduate recruitment and training

SHADOWING EXPERIENCE

Medi-Gators

Aug. 2022 - Present

- Achieved 320+ virtual clinical shadowing hours.

Florida Radiology Consultants

May 2022 - Jun. 2022

- Achieved 50+ shadowing hours with interventional radiologists in a hospital setting.
- Notated abnormalities in imaging results, interviewed patients, collected patient history, observed surgical procedures, updated charts, and consulted with physicians.

WORK EXPERIENCE

Patient Care Assistant at Shands Hospital

Jun. 2025-Present

Canterbury School of Fort Myers

Jun. 2022 - Aug. 2023

- Managed and coordinated camp operations, including activity planning and camper supervision.
- Conferred with management to discuss and resolve participant complaints.
- Implemented and enforced safety protocols and procedures to ensure a secure work environment.

Whiskey Creek Station

May 2022 - Jun. 2022

- Collaborated with kitchen staff and servers to manage high-volume service periods.
- Finalized customer orders and delivered food and drinks to customers.

EXTRACURRICULARS

Student Alliance Against Neurodegenerative Disease

Feb 2025-Present

American Association for the Advancement of Science

Feb 2025-Present

American Society for Pharmacology and Experimental Therapeutics

Jan. 2025 - Present

North Central Florida Chapter, Society for Neuroscience

Jan. 2023 - Present

- Advocated for neurological health and patient care through community outreach and education initiatives.
- Engaged with a diverse network of neuroscientists to broaden research perspectives and foster collaborations.

UF Neuroscience Club

Aug. 2022 - Present

Project Downtown Gainesville

Jan. 2023 - Present

Hands-On Gainesville

Feb. 2023 - Mar. 2023

AS SEEN IN

American Association for the Advancement of Science. (2025). 2025 AAAS Annual Meeting Posters. Science, 388(6744), 261.

Jaffee, M. (2025). UF undergrad takes top prize in national science contest. Ufl.edu; McKnight Brain Institute University of Florida. <https://mbi.ufl.edu/2025/04/21/uf-undergrad-takes-top-prize-in-national-science-contest/>

MANUSCRIPT IN PREPARATION

Phan L, **Borg D**, Newman A, Miller E., Keil K., and Khoshbouei H. *Of Mice and Meth: The Sex-Driven Influence of Methamphetamine*

Phan L*, Miller E, **Borg D**, Iacob M., Chao M., Seibold J, Gopinath A, Lin M, and Khoshbouei H. Transneuronal Alpha-Synuclein Propagation in the Midbrain induces Dorsal Vagal Complex Pathology

Phan L., Miller E., Gopinath A., Newman A., Kramer S., **Borg D.**, Seibold J., Lin M., and Khoshbouei H. Craving Without Dopamine? Sex Differences in Methamphetamine-Associated Cue Conditioning

Phan L., Kramers S., Newman A., **Borg D.**, Iacob M., Ali S., Gopinath A., Seibold J., Lin M., Miller E. and Khoshbouei H. Regulation of Dopamine Transmission by Δ^9 -Tetrahydrocannabinol (THC) in the Brain.

Phan L., Kramers S., Iacob M., Newman A., **Borg D.**, Iacob M., Gopinath A., Seibold J., Lin M., Miller E. and Khoshbouei H. Δ^9 -Tetrahydrocannabinol blunts Methamphetamine's impact on the mesolimbic system.

MANUSCRIPT UNDER REVIEW

Phan L, Miller D, Gopinath A, **Borg D**, Newman A, Sorrentino Z, Stephan Quintin, Giasson B, and Khoshbouei H. *Parkinson's Paradox: Alpha-Synuclein's Selective Strike on SNc Dopamine Neurons over VTA*

POSTER PRESENTATIONS

***First place in undergraduate section**

Borg D., Phan L., Miller D., Gopinath A., Lin M., Gunther D., Kiel K., Quintin S., Hasanpour Z., Newman A., Sorrentino Z., Miller E., Seibold J., Hoh B., Giasson B., and Khoshbouei H., *Parkinson's Paradox: Alpha-Synuclein's Selective Strike on SNc Dopamine Neurons over VTA*

University of Florida Undergraduate Research Symposium, April 8, 2025, Gainesville, FL
ASPET, April 5, 2025, Portland, OR

Borg D., Phan L., Miller D., Gopinath A., Zarah H., Khoshbouei H., α Synuclein Differentially Regulates Dopamine Transmission in the Midbrain.

UF College of Medicine, Celebration of Research, February 25, 2025, Gainesville, FL

***Borg D.**, Phan L., Miller D., Gopinath A., Hasanpour Z., Khoshbouei H., α Synuclein Differentially Regulates Dopamine Transmission in the Midbrain.

AAAS, February 15, 2025, Boston, MA

***Borg D.**, Phan L., Miller D., Gopinath A., Hasanpour Z., Khoshbouei H., α Synuclein Differentially Regulates Dopamine Transmission in the Midbrain.

NCF SfN, February 7, 2025, Gainesville, FL

Phan L., Miller D., Gopinath A., Hansen C., **Borg D.**, Newman A., Sorrentino Z., Giasson B., and Khoshbouei H. Contrasting Effects of alpha-Synuclein Overexpression on Dopamine Neuronal Dynamics in the VTA vs SNc.

ASPET, May 15, 2024, Arlington, VA

Phan L., **Borg D.**, Newman A., Streit W.J., Khoshbouei H. Animals models of BBB perturbations to study iron dyshomeostasis.

SendCon, October 12, 2023, Atlanta, GA

ORAL PRESENTATIONS

How the Immune System Tunes Monoamine Signaling.

ASPET, April 4, 2025, Portland, OR

α Synuclein Differentially Regulates Dopamine Transmission in the Midbrain

January 29, 2025, Gainesville, FL

Influence of α Syn on Dopamine Dynamics and Neuronal Viability in the SN and VTA.

September 6, 2024, Gainesville, FL

Alpha-Synuclein Overexpression in Parkinson's Disease

May 24, 2024, Gainesville, FL

SKILLS AND CERTIFICATIONS

Basic Life Support (BLS) Certified, Certified Nursing Assistant (CNA), Life Sciences RCR Certified, Data Processing, Microsoft Office Suite, GraphPad Prism, Mouse Care, Perfusions, General Laboratory Maintenance, Histological experimental design, Immunohistochemistry (IHC), Image analysis, Immunofluorescence (IF), Image J, Adobe Illustrator, Rodent coiffeur.