

Nathan Boyle

nmboyle.com

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EDUCATION

2019-2024 **University of Maryland**
Bachelor of Science – Neuroscience
High Honors in Neuroscience
Health, Humanities, & Medicine Minor
Bachelor of Arts – Persian Studies

WORK & RESEARCH EXPERIENCE

08/2020 - pres **Center for OCD, Anxiety, & Related Disorders for Children (COACH)**
Johns Hopkins University School of Medicine
Research Assistant

Spring 2022 **U.S. Department of State**
Bureau of Oceans and International Environmental and Scientific Affairs
Office of International Health & Biodefense
Intern

01/2020 -
12/2021 **First-Year Innovation & Research Experience**
Department of Cell Biology & Molecular Genetics, University of Maryland
Student Researcher, Summer Fellow, Peer Research Mentor

12/2019 -
03/2020 **Araneda Lab**
Department of Biology, University of Maryland
Research Assistant

Summer 2019 **Language Fluency Lab**
Department of Hearing and Speech, University of Maryland
Research Assistant

Summer 2019 **Language Development Lab**
Department of Hearing and Speech, University of Maryland
Research Assistant

PRESENTATIONS & PUBLICATIONS

Peer-Reviewed Journal Articles

1. Ramsey KA, Essoe JK, **Boyle NM**, Patrick AK, McGuire JF. Immersive Virtual Reality Exposures for the Treatment of Childhood Anxiety. *Child Psychiatry Hum Dev.* 2023 Nov 20. doi:10.1007/s10578-023-01628-4.

Abstracts

1. **Boyle NM**, Ramsey KA, McGuire JF, Essoe J K-Y. Characterizing Physiological Markers of Premonitory Urges in Tourette Syndrome: A Machine Learning Approach. *International Journal of Medical Students.* 2022 Apr 25;10:S23. doi:10.5195/ijms.2022.1359

Oral Presentations

1. **Boyle NM**, Ramsey KA, McGuire JF, Essoe J K-Y. Improving Effectiveness and Accessibility of Treatments for Tic Disorders: Implications for Low-Resource Contexts in Central Asia. Oral presentation at: UMD Arabic and Persian Language Flagship Programs Student Research Colloquium, University of Maryland, 2023 May 1.

2. **Boyle NM**. Effects of Sociopolitical Factors on the Mental Health of Persian Speakers. Oral presentation at: UMD Arabic and Persian Language Flagship Programs Student Research Colloquium, University of Maryland, 2024 April 30.

Poster Presentations

1. **Boyle N***, Chua C*, Shue M*, Voss L*. -1 Programmed Ribosomal Frameshifting in Equine Torovirus. Poster presented at: FIRE Summit, University of Maryland, 2020 Nov 16. Presented virtually.
2. **Boyle N***, Chua C*, Shue M*, Voss L*. Programmed -1 Ribosomal Frameshifting in Equine Torovirus. Poster presented at: Undergraduate Research Day, University of Maryland, 2021 Apr 26-30. Presented virtually.
3. Akotia T*, **Boyle N***, Mahreen N, Pellegrino F*, Sahi A*, Vieira C. -1 Programmed Ribosomal Frameshifting in Single-Stranded RNA Viruses. Poster presented at: Undergraduate Research Day, University of Maryland, 2021 Apr 26-30. Presented virtually.
4. **Boyle NM**, Ramsey KA, McGuire JF, Essoe J K-Y. Characterizing Physiological Markers of Premonitory Urges in Tourette Syndrome: A Machine Learning Approach. Poster presented at: American Physician Scientists Association (APSA) Northeast Regional Conference, University of Pittsburgh School of Medicine, 2022 Jan 15-16. Presented virtually.
5. Absalon NP*, **Boyle NM***, Cooper JS*, Francis JM*, Ho T-W, Bierman HS. Effects of Muscarinic Cholinergic Drugs on Crayfish MRO Adaptation. Poster presented at: Undergraduate Research Day, University of Maryland, 2022 Apr 27.
6. **Boyle NM**, Ramsey KA, McGuire JF, Essoe J K-Y. Using Machine Learning To Identify Physiological Markers in Tourette Syndrome. Poster presented at: Undergraduate Research Day, University of Maryland, 2022 Apr 27.
7. Absalon NP*, **Boyle NM***, Cooper JS*, Francis JM*, Ho T-W, Bierman HS. Effects of Muscarinic Cholinergic Drugs on Crayfish MRO Adaptation. Poster presented at: Neuroscience Research Day, University of Maryland, 2022 May 6.
8. **Boyle NM**, Ramsey KA, McGuire JF, Essoe J K-Y. Using Machine Learning To Identify Physiological Markers in Tourette Syndrome. Poster presented at: Neuroscience Research Day, University of Maryland, 2022 May 6.
9. **Boyle NM**, Murray B, Cantrell S, Chang A, Kosuri T, Miglo F, Wayne N, Essoe J K-Y. Exploring Psychological & Psychiatric Factors in Youth with Tic Disorders. Poster presented at: JHU DREAMS, Johns Hopkins University, 2023 April 17-21.
10. **Boyle NM**, Ramsey KA, McGuire JF, Essoe J K-Y. Evidence of Physiological Markers for Tourette Syndrome Using Machine Learning. Poster presented at: Undergraduate Research Day, University of Maryland, 2023 Apr 26.
11. **Boyle NM**, Ramsey KA, McGuire JF, Essoe J K-Y. Evidence of Physiological Markers for Tourette Syndrome Using Machine Learning. Poster presented at: Neuroscience Research Day, University of Maryland, 2023 April 28.

* Authors contributed equally

HONORS, AWARDS, & FELLOWSHIPS

National

2021 **Critical Language Scholarship – Persian**, U.S. Department of State

University/University-Affiliated

2024 **Maryland Medallion Society**, Univ. of Maryland
2023 **ARHU Dean's Senior Scholar**, Univ. of Maryland
2023-2024 **UMD Language House Living and Learning Program**
2023 **Summer Language Institute Study Scholarship**, Univ. of Maryland
2022 **Undergraduate Summer Research, Travel, and Educational Enrichment Award**,
CMNS Alumni Association
2022 **Amouzegar Undergraduate Scholarship in Persian Studies**, Roshan Institute
2021-2022 **Global Fellow (Global Health & Water Security)**, Univ of Maryland
2021 **Maryland Summer Scholar**
2021 **Amouzegar Undergraduate Scholarship in Persian Studies**, Roshan Institute
2020 **Top Ten Freshman**, Omicron Delta Kappa Sigma Circle
2020 **Summer Fellow**, First-Year Innovation & Research Experience, Univ of Maryland
2019-2024 **Persian Flagship Program Participant**

TEACHING

Fall 2022 **Course Redesign Assistant**, Diseases of the Nervous System (BSCI452/NACS728N)
Fall 2021 **Teaching Assistant**, Cellular and Molecular Neuroscience (BSCI353/NEUR306)
Sp/Fa 2021 **Peer Mentor**, Found in Translation (Virology) Research Stream

CERTIFICATIONS

12/21–12/24 **Mental Health First Aid**
05/24–05/26 **Persian Oral Proficiency Interview – ILR 3**
06/19–07/27 **Social and Behavioral Research – CITI Program**
07/22–07/25 **Human Subjects Research - Biomedical Research – CITI Program**

SKILLS

Technical

BioPac (psychophysiology)	Machine Learning	CHILDES Database
eSense Biosensors	Dart, Flutter	L ^A T _E X
MATLAB	AcqKnowledge	ApE (A plasmid Editor)
Mobile App Development	LabChart	Research EEG

Laboratory

Intra- and Extracellular Recording	Aseptic culture technique	Agarose gel electrophoresis
Polymerase Chain Reaction (PCR)	Nanodrop	Plasmid miniprep

Language

English (native)	Persian/Farsi (Prof. Working Proficiency)
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SOCIETY MEMBERSHIPS

Academic/Professional

2021-2022 **American Physician Scientists Association**
2019-2022 **Cognitive Science Society**

Honors

2022-2024	Neuroscience Honors Program – University of Maryland
2022-pres	Omicron Delta Kappa (National Leadership Honor Society)
2022-pres	Nu Rho Psi (Neuroscience Honor Society)

LEADERSHIP & VOLUNTEERING

2022	Maryland Undergraduate Research Journal – Treasurer
2022	One for the World UMD – Co-President
2022-2023	Partners In Health Engage UMD – Founder and President
2021	First-Year Innovation & Research Experience (FIRE) Student Leadership Council
	Student Government Association (SGA)
2022	Research & Data Coordinator
2021	Off Campus Outlying Representative, Health & Wellness and Student Affairs Committees
2020	Freshmen Connection Representative, Academic Affairs and Civic & Governmental Affairs Committees

CLINICAL VOLUNTEERING

02/2024-pres	R. Adams Cowley Shock Trauma Center University of Maryland Medical Center
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INTERESTS & HOBBIES

2023-pres	Setar (Persian lute)
2014-pres	Cello

Last Updated: June 16, 2024