

Tyler Rector

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EDUCATION

OLD DOMINION UNIVERSITY

Norfolk, VA

Major in Biomedical Sciences; 4th Year, GPA: 3.65

RESEARCH EXPERIENCE

Brachova Alavarez Laboratory, Eastern Virginia Medical School - Norfolk, VA

Research Assistant (Paid, Part-time)

June 2025 - May 2026

- Developed procedure for ovarian tissue collection, tissue culturing, preparation, and sectioning. Working on project to investigate how mitochondrial stress alters gene expression and alternative splicing in ovarian tissue, utilizing long-read RNA sequencing.
- Manage breeding of the laboratory mice colony, including setting up breeder cages and tracking litters to support ongoing experiments.

Mechanobiology Laboratory, Mechanical & Aerospace Engineering - Norfolk, VA

Undergraduate Researcher (Volunteer)

January 2024 - Current

- Awarded three research grants to utilize optogenetic techniques to study the role of RHO GTPases in generating mechanical forces in tissues and cells. Authoring an undergraduate thesis detailing the mechanical impact of the constitutively active RhoQ63L mutant plasmid in epithelial cells.

Gauthier Laboratory, Biological Sciences Department - Norfolk, VA

Undergraduate Researcher (Student)

August 2024 - May 2025

- Developed and validated in silico primers targeting microsatellite loci in the disease carrying tick *Amblyomma maculatum*, and performed bioinformatic analysis of the resulting microsatellite dataset.

Other: COVA CCI Cybersecurity Research Project, “A Review of Threat Vectors to DNA Sequencing Pipelines”

VOLUNTEER EXPERIENCE

Virginia Beach Rescue Squad

Virginia Beach, VA

EMT Provider (NREMT ID: E3824316)

May 2024- April 2025

- Provided Basic Life Support (BLS) care in prehospital settings as part of a collaborative EMS team. Assisted with patient assessment, treatment, and transport, contributing towards effective and timely delivery of care.

ODU Model United Nations Society

Secretary Treasurer

2022-Current

- Managed \$70,000 in revenue from over 50 high schools for an 800 delegate Model United Nations conference. Automated the generation and printing of awards, invoices, and other conference materials.
- Previously held the position of Chief of Staff managing the staffing and recruitment of 60+ volunteer staff members from ODU, Regent, Hampton University, and TCC.

Student Government Association

Transportation & Safety Director

2022-2023

- I worked with the City of Norfolk to improve crosswalk safety, represented students on the State Council of Higher Education for Virginia to promote college affordability through measures like extending COVID relief grants, and led a campus-wide map project to restore awareness of ODU's student transportation system after ridership declines.

Americorp, American Conservation Experience

Asheville, NC

Corp member

Summer 2022

- Worked in remote mountain sites in Pisgah and Cumberland Gap controlling invasive species and building trails. Restored fire-damaged wetland and grassland sites in Cherokee National Forest.