

# Celina M. Costa

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## Education

<b>B.S., University of Massachusetts Dartmouth</b>	2019- 2023
Biology, Cell and Molecular Concentration	
Commonwealth Honors	
GPA: 3.6	
<b>Dartmouth High School</b>	2015- 2019
National Honors Society	
GPA: 3.5	

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## Publications

- Costa CM, DiNuzzo E, Nogueira H, Donelan S, Sheriff MJ (In Review) Predator-induced changes in prey behavior alters the lipid and protein content in both prey and their resources. Aimed submission to *Oecologia*.
- DiNuzzo E, Nogueira H, Donelan S, Sheriff MJ, Costa CM, Costa VA (In Review) Emergent effects of a non-native and resident predator on shared native prey risk responses. Aimed submission to *Functional Ecology*.

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## Awards

John & Abigail Adams Scholarship	2019- 2023
UMass Dartmouth Dean's Scholarship	2019- 2023

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## Research Experience

### **Prey Risk Responses to a New Invader** May 2022- Fall 2023

Advisor: Drs Michael Sheriff and Sarah Donelan, UMass Dartmouth

- Examined how *Hemigrapsus sanguineus* disrupts community structure of a resident trophic cascade
- Individually marked *Nucella* and mussels to measure individual growth and refuge use
- Used Palmer (1982) buoyancy technique for non-destructive measure of tissue and shell mass of *Nucella* and mussels
- Assisted in field surveys to quantify the relationships between *Hemigrapsus*, *Carcinus*, *Nucella*, and mussel in New England intertidal communities

### **Impact of predation risk on prey lipid and protein levels** Sep 2022- Apr 2024

Advisor: Dr. Michael Sheriff, UMass Dartmouth

- Investigated impact of predation risk on lipid/protein content of prey using a marine system
- Extracted tissue from *Nucella* and mussels for PCA
- Used Soxhlet extraction technique to reduce dehydrated tissue to lipid-free organic material and a furnace to reduce organic material to ash
- Calculated protein and lipid content of prey

### **Children's emotions and salivary cortisol** Nov 2023- Mar 2024

Advisor: Drs Michael Sheriff and Robin Arkerson, UMass Dartmouth

- Performed enzyme immunoassay on saliva samples
- Followed Salimetrics salivary cortisol procedure

- Calculated percent bound and determined cortisol concentrations by interpolation using 4-parameter nonlinear curve fit

#### **Effect of early life ecological conditions on health of deer**

Oct 2023- Present

Advisor: Drs Joe Hediger, Caesar Kleberg Wildlife Research Institute and Michael Sheriff, UMass Dartmouth

- Transferred fecal samples into labeled tubes
- Lyophilized and pulverized fecal samples
- Weighed  $0.07 \pm 0.005$  of dry sample and recorded exact mass
- Performed radioimmunoassay to determine cortisol concentration

#### **Energetic analysis of Fish from the Northeast U.S. Shelf**

Apr 2025- Present

Advisor: Dr Kenneth Oliveira, UMass Dartmouth

- Weighed and prepared various species of fish for PCA
- Used Soxhlet extraction technique to reduce dehydrated tissue to lipid-free organic material and a furnace to reduce organic material to ash
- Calculated protein and lipid content
- Created energetic curves for each species

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### **Work Experience**

#### **Supervisor, Mellisa's Pet Depot**

2019- 2024

83A Faunce Corner Mall Rd, Dartmouth, MA

- Maintained proper animal husbandry
- Recognized ailments and administered medication
- Trimmed/clipped nails and flight feathers
- Assisted customers regarding pet care and nutrition
- Trained associates and delegated tasks
- Placed/received store orders

#### **Manager & Research Associate, Dr. Sheriff's Lab, UMass Dartmouth**

2023-Present

285 Old Westport Rd, North Dartmouth, MA 02747

- Trained, assigned, and supervised volunteers on project tasks
- Collaborated and coordinated with team members
- Maintained detailed records of project data and progress
- Managed equipment usage and maintenance logs

#### **Technician assistant, Bay State Veterinary Emergency & Specialty Services**

2024-Present

463 Swansea Mall Dr, Swansea, MA 02777

- Restrained animals during triages, stats, and treatments
- Performed in-house diagnostics using IDEXX, Heska, Zoetis, and Bionote analyzers
- Observed the use of advanced imaging equipment (ultrasound, X-ray, CT, and linear accelerator)
- Assisted with anesthesia monitoring and post-operative care
- Supported clients through end-of-life decisions

#### **Research Associate, Dr. Oliveira's Lab, UMass Dartmouth**

2025-Present

285 Old Westport Rd, North Dartmouth, MA 02747

- Collaborated and coordinated with team members
- Maintained detailed records of project data and progress

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### **Skills**

#### **Veterinary**

- Animal handling and restraint
- Veterinary medical terminology
- Specimen collection and preparation

- IDEXX, Heska, Zoetis, and Bionote diagnostic analyzers

### **Laboratory & Research**

- Cell culture and aseptic technique
- Microscopy
- Radioimmunoassay (RIA)
- Enzyme Immunoassay (EIA/ELISA)
- Soxhlet extraction technique
- DNA/RNA extraction, PCR, gel electrophoresis
- Scientific writing

### **Data Analysis & Technical Proficiency**

- R programming: ANOVA, mixed-effects models, standard curve modeling
- Statistical reporting and figure preparation for publication
- File management and documentation for both research and creative projects
- Microsoft Office and Google Workspace
- Adobe Creative Cloud