

# Lydia Michelina DiMattia

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## ACADEMIC HISTORY

*September 2023- Present*

### **Rutgers University, New Brunswick**

GPA: 4.0/4.0 (As of 10/2023)

Ph.D. in Earth & Planetary Sciences

Advisor: Dr. Paul Falkowski

*September 2021-May 2023*

### **Rutgers University, Camden**

GPA: 4.0/4.0

MS in Biology

Thesis Title: “*A New Species of Psychrophilic Bdelloid Rotifer from North America*”

Advisor: Dr. Daniel Shain

*August 2017-April 2019*

### **Thomas Jefferson University**

GPA: 3.6/4.0

Post Baccalaureate Pre-Professional Program

*October 2015- June 2016*

### **University of Oxford- St. Edmund Hall**

GPA: 3.87/4.0

Experimental Psychology & Politics

*August 2013-May 2017*

### **Chestnut Hill College**

GPA: 3.9/4.0

BA in Psychology- *Summa Cum Laude*

Minors in Criminal Justice, Political Science and Legal Studies

## RESEARCH EXPERIENCE

- Rutgers University, Camden: The Shain Lab studies the evolution and adaptation of psychrophilic organisms, the secretion of leech cocoons, and the production of embryonic stem cells. For my thesis research, I studied a new species of psychrophilic Bdelloid rotifer by tracing their evolutionary origins and characterizing their community composition. My research confirmed their status as a new species and discovered three haplotypes. The rotifer DNA sequences I obtained will be published on GenBank in December 2023.

- Thomas Jefferson University: Aplin Lab (see employment). The Aplin Lab's research focuses on cutaneous and uveal melanoma biology and the signal transduction pathways involved in the developed resistance to therapeutic techniques. During my time in the lab, I conducted western blots, mycoplasma testing, isolated mouse lung cells, and split cells.
- University of Oxford: Pursued original research within the Experimental Psychology Department under the supervision of Professor. Maryanne Martin. Our research focused on individual and cultural differences in monetary decision-making.

## **RESEARCH INTERESTS**

- Astrobiology
- Microbial Biosignatures
- Co-evolution of the Biosphere & Geosphere
- Abiogenesis
- Extremophile Evolution & Adaptation Mechanisms

## **SKILLS/ SOFTWARE**

- Chromas
- Clustal Omega
- Bioedit
- Mega 11
- PRISM
- Metagenomic Analysis
- Building Phylogenetic Trees
- Polymerase Chain Reactions
- Western blots
- Mycoplasma Testing
- Isolating DNA from microorganisms

## **SCIENCE COURSES**

- Undergraduate: Biology I & II, Physics I & II, General Chemistry I & II, Genetics, Intuitive Biostatistics, Organic Chemistry I & II, Biochemistry.
- Graduate: Molecular Mechanisms in Developmental Genetics, Urban Ecology, Community Ecology, Evolution, Fungi in Ecosystems, Biochemistry, Quantum Biology.

## **EMPLOYMENT**

*April 2019- August 2023*

### **Thomas Jefferson University: Cancer Biology Research Assistant**

- Create, organize, and maintain inventories of plasmids, siRNA, antibodies, inhibitors, glycerol stocks, cell lines, etc.
- Prepare the lab for inspections, hazardous waste disposal, enforce biosafety protocols.
- Assist graduate students and post-docs with tasks such as retrieving media, reagents, and chemicals needed for experiments.

*May 2018-September 2018*

### **TowerView Health: Patient Relationship Specialist**

- Conduct patient interviews to collect medication histories.

- Log and organize patient information using TowerView software to help move patients through reconciling their medication.
- In addition to working as a Patient Relationship Specialist, I was also trained as a Prescriber Relationship Specialist and a Health Assistant.

## HONORS AND AWARDS

- **Delta Alpha Pi:** International Honors Society founded to recognize high-achieving students with disabilities who are attending college.
- **Personal Scholarship Recipient:** Received a scholarship for Thomas Jefferson University by Lynne Honickman, Founder and President of the Lynne Honickman Foundation.
- **Summa Cum Laude:** Graduated ninth in my class, with a BA in Psychology.
- **Phi Beta Delta:** Honors Society for International Scholars.
- **Delta Epsilon Sigma:** National Scholastic Honors Society for students of colleges and universities founded in Catholic tradition.
- **Psi Chi:** International Honors Society in undergraduate Psychology.
- **Alpha Phi Sigma:** International Honors Society in undergraduate Criminal Justice
- **Alpha Lambda Delta:** National first-year students honors society.
- **Phi Sigma Alpha:** National Political Science Honors Society.
- **Dean's List Recipient:** Received Dean's List each semester completed at Chestnut Hill College.
- **Interdisciplinary Honors Program:** Competitive 3-year-long honors program at Chestnut Hill College.
- **Hilda E. Bretzlaff Scholarship Recipient:** Awarded to moral, creative, and ambitious students.
- **Graduate Student Achievement Scholarship:** Rutgers University, Camden.

## PRESENTATIONS

- **AEROSPACE MEDICAL ASSOCIATION (ASMA) SCIENTIFIC MEETING:** In 2021, I joined the Aerospace Medicine Student and Resident Organization (AMSRO) affiliated with Sidney Kimmel Medical College. While in the group, I participated in meetings and co-authored "Sexual & Gender Minorities: Knowledge Gaps in Astronautics & Aerospace Medicine," which was presented by MD Candidate Nicolas Nelson at the ASMA Scientific Meeting in August 2021.