

## Zachary DeKay

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501 N Roadrunner Pkwy, Apt 502 • Las Cruces NM, 88011 • zacdk@nmsu.edu • (575) 420-7169

### Education:

#### New Mexico State University

Master of Science - Biology

Focus in Biotechnology [3.9 GPA]

Relevant Coursework: Advanced Genomics Technology, Molecular Cellular Biology, Virology, Statistical Inference.

Las Cruces, NM

Summer 2026

#### New Mexico Institute of Mining and Technology

Bachelor of Science – Biology [Magna Cum Laude]

Socorro, NM

May, 2025

#### Eastern New Mexico University

Associate of Science – Biology

Roswell, NM

May, 2023

#### Eastern New Mexico University

Associate of Science – Mathematics

Roswell, NM

May, 2023

### Research Experience:

#### Comparative Immunology Laboratory, Advisor: Dr. Mario Castillo, NMSU

Graduate Research Assistant

Las Cruces, NM

August 2025 – August 2026

- Participated in optional research as part of a master's program.
- Contributed to a comparative immunology project examining thioester-containing protein expression in *Biomphalaria glabrata*.
- Assisted with microscopy-based gene analysis using RNAscope and BaseScope probes.
- Collected and examined microscopy images based on previous lab members contributions.
- Maintained live snail models through routine feeding and care
- Attended weekly lab meetings where we discussed experimental planning, data interpretation, and literature review.
- Followed laboratory protocols, aseptic technique, and safety standards.

### Teaching Experience:

#### New Mexico State University

Teaching Assistant

Las Cruces, NM

August 2025 – May 2025

- Assisted the instructor in delivering course materials for Cellular Biology (377).
- Instructed a human biology laboratory (1120L).
- Held regular office hours to support student learning and answer questions.
- Graded assignments while providing constructive feedback.
- Monitored and encouraged students to engage during lectures and lab.
- Maintained accurate records of attendance, grades, and participation.

## **Clinical & Professional Experience:**

### **BCA Medical Associates Pediatric Clinical Assistant**

Roswell, NM  
**Summers, 2024 & 2025**

- Provided care to children and adolescents, assisted with medical treatments, administered vaccines, and monitored patient progress.
- Worked closely with physicians and other healthcare professionals.

### **Eastern New Mexico University Student Hire Lab Assistant**

Roswell, NM  
**January - May 2023**

- Worked alongside faculty to prepare labs and equipment for entry-level college student classes. (Microbiology, Anatomy & Physiology, Chemistry I & II)

### **Eastern New Mexico University Student Hire Information Technology**

Roswell, NM  
**September 2022 - June 2023**

- Supported IT infrastructure projects across campus.
- Worked with senior technicians to assist staff and students with troubleshooting IT issues.

## **Certifications & Trainings:**

### **CITI Program Trainings:**

- Select Agents, Biosecurity and Bioterrorism
- Emergency and Incident Response to Biohazard Spills and Releases
- OSHA Personal Protective Equipment Training
- Initial Biosafety Training
- Research Security Training (Combined)

### **NMSU Environmental Health & Safety Trainings:**

- Occupational Safety and Health: Hazard Communication
- Occupational Safety and Health: Blood-Borne Pathogens
- 2026 Annual SET Curriculum

## **Technical Skills:**

- Vaccine administration following safety protocols.
- Performed measuring of vitals and documentation.
- Handling of live invertebrate model organisms (*Biomphalaria glabrata*, *D. melanogaster*).
- Data analysis and visualization using Excel and R.
- Exposure to common molecular and microbiological methods, including sandwich ELISAs, bacterial culture, slide staining, PCR, and RT-PCR.

## **References:**

- Available upon request