

# Remington R. Motte

Lab Assistant, Utah Valley University  
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## Education

See page 3 for relevant courses

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BS Utah Valley University, Orem May 2023  
Department of Biology  
**Independent Project:** Investigating the relationship between DSCAM evolution and arthropod sociality.  
Advisor: Dr. Carl Hjelman

## Research Experience

See page 3 for relevant skills

### Research Positions

**Independent Researcher**, Hjelman Lab Spring 2022-Present  
Advisor: Carl Hjelman, PhD, Hjelman Lab, Utah Valley University  
Investigating: Using comparative phylogenetics to investigate the relationship between brain development genes in neuron number in vertebrates and cephalopods, and sociality in arthropods.

- Developed and implemented independent research project
- Utilized various phylogenetic tree reconstruction methods
- Use of comparative phylogenetic analyses and programs
- Use of molecular biological software

**Research Assistant**, Brook Lab Spring 2023-Present  
Advisor: Lauren Brooks, PhD, Brook Lab, Utah Valley University  
Investigating: Studying the evolution of biocide resistance and identifying mutated genes in antibiotic resistant bacteria

- Bacterial culturing
- ZoI and CFU testing
- Identifying mutant genes
- Bash script writing and pipelining

## Presentations

\*Presenting author, <sup>P</sup>Poster presentation, <sup>O</sup>Oral presentation

### 2023

\***R. Motte**, C. Hjelman <sup>O</sup>The evolution of an undergraduate independent research project: Literature searches, data mining, and open-source programs to investigate a gene related to sociality.  
-Entomology Society of America 2023 National Conference Invited Oral Presentation

\***R. Motte**, L. Brooks <sup>P</sup>Bacteria has Thick Skin: Biocide Resistance in Members of Staphylococcus.  
-Spring 2023 UVU Biology Department Research Poster Day, Utah Valley University.

\***R. Motte**, C. Hjelman. <sup>O</sup>Investigating the relationship between DSCAM evolution and arthropod sociality.  
-Entomology Society of America 2023 Pacific Branch Meeting Accepted Oral Presentation

\***R. Motte**, C. Hjelman. <sup>P</sup>Smart Animals and Social Critters: The relationship of Protocadherin evolution and neuronal diversity and the impact of DSCAM evolution on sociality.  
-Utah Conference on Undergraduate Research Poster Presentation, University of Utah.

## 2022

\*S. Morreal, \*S. Smith, \*C. Monsen, \***R. Motte**, N. Hughes, and O. Kopp. <sup>P</sup>Effects of Varying pH on *Pisum sativum*.

-Fall 2022 UVU Biology Department Research Poster Day, Utah Valley University.

## *Grants/Awards/Honors*

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### Grants

Scholarly and Creative Activities Council Student Dissemination (\$1,481)	2024
Student Activities Committee Grant Dissemination Grant (\$470)	2024
Scholarly and Creative Activities Council Student Dissemination (\$1,354)	2023

### Awards

Salutatorian of Pinnacle Canyon Academy Scholarship (\$500)	2018
Scholar Athlete of the Year of Pinnacle Canyon Academy Scholarship (\$300)	2018

### Honors

Dean's List, Utah Valley University	Fall of 2018, Spring of 2023
Salutatorian, Pinnacle Canyon Academy	2018

## *Teaching Experience & Outreach*

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### Teaching Experience

<b>Principles of Chemistry Adjunct Instructor</b> , Utah Valley University	Spring 2024
<ul style="list-style-type: none"><li>Instruct undergraduate non-chemistry major students in intro chemistry principles and laboratory techniques.</li></ul>	
<b>Zoology Teaching Assistant</b> , Utah Valley University	August 2022-May 2023
<ul style="list-style-type: none"><li>Grade undergraduate student assignments and answer questions related to intro zoology</li></ul>	
<b>Chemistry Teaching Assistant</b> , Utah Valley University	August 2022-May 2023
<ul style="list-style-type: none"><li>Grade undergraduate student assignments and answer questions related to intro chemistry</li></ul>	
<b>Elementary Teachers Assistant</b> , Pinnacle Canyon Academy	January 2018-May 2018
<ul style="list-style-type: none"><li>Assist instructor with teaching elementary students math, reading and science</li></ul>	

### Outreach

Entomology Children's Outreach Event, Springville Library	June 2023
Entomology Children's Outreach Event, Spanish Fork Library	June 2023
Utah Valley University's Darwin Day Event	February 2023

## *Professional Experience*

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### Job position

<b>Lab Assistant</b>	January 2024-Present
Chemistry Department, Rocky Mountain Laboratories	
Description: Help lab technicians run tests to determine ion concentration, blood cell count, type and shape as well as resulting.	
<b>Stockroom &amp; Lab Assistant</b>	August 2022-December 2023
Chemistry Department, Utah Valley University	
Description: Assisting in moving lab equipment, and setting up labs (Principles of Chemistry and Analytical Chemistry). Preparing chemical reagents, ordering chemicals, and assisting in disposing of chemicals, etc.	

<b>Direct Service Provider</b>	May 2022-August 2022
Rise Services, Orem, UT	
Description: Helping disabled kids participate in summer activities and work on their own individual goals	
<b>Retail Sales Associate</b>	July 2018-May 2022
Big 5 Sporting Goods	
Description: Assist customers in a timely and friendly manner with sporting goods needs.	

## *Academic Affiliations/Clubs*

### Academic Affiliations

Entomological Society of America member	2023-present
Utah Valley University Evolution and Bioinformatics Club member	Fall 2022-present

### Clubs

UVU Co-Ed Volleyball	Fall 2022-present
UVU Bachata Dance Club	Spring 2023

## *Relevant Courses*

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| <ul style="list-style-type: none"> <li>• Cell Biology</li> <li>• Molecular Biology</li> <li>• Microbiology</li> <li>• Neuroscience</li> <li>• Biological Anthropology</li> <li>• General Ecology</li> <li>• Evolution</li> <li>• Genetics</li> </ul> | <ul style="list-style-type: none"> <li>• Genomics</li> <li>• Bioinformatics, Data Skills</li> <li>• Principles of Chemistry I &amp; II</li> <li>• Organic Chemistry I&amp;II</li> <li>• Biochemistry</li> <li>• Principles of Statistics</li> </ul> |
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## *Skills*

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| <ul style="list-style-type: none"> <li>• Usage and implementation of chemical storage databases</li> <li>• Preparation of buffers and solutions</li> <li>• Supercomputer familiarity</li> <li>• R for statistics and data visualization</li> <li>• Bayesian phylogenetic methods</li> </ul> | <ul style="list-style-type: none"> <li>• Basic bash scripting</li> <li>• Culturing bacteria</li> <li>• Biocide resistance testing</li> <li>• Galaxy</li> </ul> |
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