

# Violet Kimble

vkimble@drew.edu

www.linkedin.com/in/violet-k

**Research Interest:** Applying bioinformatics tools to understand complex brain disorders and diseases

## EDUCATION

Drew University, Madison, NJ

2017 – 2021

B.S. in Neuroscience, with Minor in Statistics

## SKILLS

*Computational:* SPSS; R, Python (intermediate proficiency); MATLAB, Rhino (basic proficiency)

*Certifications:* Basic Responsible Conduct of Research (RCR) + Animal Subjects and Human Subjects; Mice handling training for research at the Jackson Laboratory

*Laboratory:* UV Spectroscopy; Cell culture; qPCR; Immunofluorescence; Western blot; Reporter gene assay; Restriction mapping; Horizontal and Agarose gel electrophoresis

## RESEARCH EXPERIENCE

### Bioinformatics Research Associate

Sept 2020 – Present

The Broad Institute of MIT and Harvard, The Stanley Center  
Boston, Massachusetts

Laboratory of Dr. Beth Stevens

- Perform single-cell analysis using Seurat to understand the role of disease-associated-microglia in the disease progression of Alzheimer's disease
- Attend weekly lab meeting to update the lab on my progress

### Biostatistics Research Assistant

Sept 2020 – Present

University of Pennsylvania, Department of Biostatistics, Epidemiology and Informatics  
Philadelphia, Pennsylvania

Laboratory of Dr. Mingyao Li

- Perform single-cell transcriptomic analysis of human retina using Seurat
- Attend weekly lab meeting to update the lab on my progress

### Neuroscience Research Associate

Sept 2020 – Present

Icahn School of Medicine at Mount Sinai, The Laboratory of Translational Psychiatry  
New York, New York

Laboratory of Dr. Drew Kiraly

- Investigate the role of gut microbiome disruptions in a rodent model of opioid use disorder
- Attend bi-weekly lab meeting to update the lab on my progress

### Summer Honors Undergraduate Research Program (SHURP) Fellow

June – Aug 2020

Harvard Medical School, Department of Medicine in the Division of Genetics  
Boston, Massachusetts

Laboratory of Dr. Martha Bulyk

- Use protein binding microarrays to perform analysis with R of human transcription factors isoforms
- Participating in virtual research lab meetings with PI and fellow researchers
- Attended seminars on various biomedical topics and personal development

### Undergraduate Researcher

May – Jul 2020

Baylor College of Medicine, Department of Medicine and Physiology  
Houston, Texas

Laboratory of Dr. Aladin Boriek

- Evaluated *in vivo* kinematics of canine diaphragm muscle and lower rib cage

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- Implementing technical computing of the diaphragm using MATLAB
- Utilizing Rhinoceros 3D to create 3D graphics of the diaphragm and rib cage
- Participating and presenting in virtual research lab meetings with PI and fellow researchers

## Research Technician; Undergraduate Research Assistant

Jan 2018 – Sept 2020

Drew University, Department of Neuroscience

Madison, New Jersey

Laboratory of Dr. Christina McKittrick

- Investigated *the effects of enriched environment on learning and memory in Long Evans rats*
- Determined *the effects of early life stress on behaviors in adult rats*
- Conducted statistical and graphical analysis of behavioral data using R
- Prepared agendas and take minutes at weekly lab meetings

## Summer Undergraduate Research Fellow

June – Aug 2019

The Jackson Laboratory, Department of Bioinformatics/Genomics

Bar Harbor, Maine

Laboratory of Dr. Elissa Chesler

- Performed *RNA-seq analysis of sex differences in the striatum cocaine response of NOD Mice*
- Executed statistical analysis and data visualization using R on Illumina RNA- seq
- Coursework: Human and Mammalian Genetics and Genomics: The 60th McKusick Short Course

## PUBLICATIONS

Saul MC, Bagley JR, Bailey LS, Datta U, Dickson PE, Dodd R, Gagnon LH, **Kimble VM**, Leonardo M, Kim S, Olson A, Roy T, Schoenrock SE, Wilcox T, Jentsch JD, Logan RW, McClung CA, Philip VM, Reinholdt LG, Rizzo SJS, Tarantino LM, Chesler EJ. (2020) Genetic variation and sex differences are missed opportunities for addiction biology. bioRxiv 2020.02.14.949784; doi: <https://doi.org/10.1101/2020.02.14.949784>

## PRESENTATIONS

**Kimble VM**, Mattioli K, Phanor SK, Kimes PK, Inukai S, Hao T, Sheynkman GM, Bass JIF, Vidal M, Bulyk ML. Using Protein Binding Microarrays to analyze DNA binding differences of Human Transcription Factor Isoforms.

- Virtual Poster; Annual Biomedical Research Conference for Minority Students. 2020 Nov 9-13
- Virtual Poster; Society for Advancement of Chicanos/Hispanics and Native Americans in Science Virtual Conference. 2020 Oct 19-24
- Virtual Talk: Virtual Summer Honors Undergraduate Research Program Student Symposium. 2020 Aug 5
- Virtual Talk: Virtual Leadership Alliance National Symposium. 2020 Aug 1

Solomon N, **Kimble VM**, Boriek A. Virtual Poster (co-author); Society for Advancement of Chicanos/Hispanics and Native Americans in Science Virtual Conference. 2020 Oct 19-24

Ford A, **Kimble VM**, Boriek A. Virtual Poster (co-author); Society for Advancement of Chicanos/Hispanics and Native Americans in Science Virtual Conference. 2020 Oct 19-24

**Kimble VM**, Boriek A. In Vivo 3D Analysis of Kinematics of Canine Diaphragm Muscle and Lower Rib Cage.

- Virtual talk presented at: Virtual Baylor SMART Student Symposium. 2020 Jul 31

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**Kimble VM**, Saul M, Chesler E. RNA-seq Analysis of Sex Differences in the Striatum Cocaine Response of NOD Mice.

- Talk; Drew University's TriBeta Honor Society Research Symposium. 2019 Apr 22; Madison, NJ.
- Poster; Annual Biomedical Research Conference for Minority Students. 2019 Nov 13-16; Anaheim, CA.
- Talk; The Jackson Laboratory's Summer Student Symposium. 2019 Aug 8; Bar Harbor, ME.

Glass K, **Kimble VM**, Jang S, Meyer C, Santana D, Santa Ana S, Shteyn D, Sirota S, Zhang Z, McKittrick C. Effects of Early Life Stress on Behaviors in Adult Rats.

- Poster; Drew University's Day of Scholars. 2019 Apr 5; Madison, MJ

## RELEVANT EXPERIENCE

### Statistics Tutor

Aug 2020 – Present

Drew University, Center for Academic Excellence

- Offer remote academic support sessions via WOnline and Zoom for introductory statistics, statistical computing in R, and special topics in statistics courses
- Work 6-8 hours a week providing individualized and group tutoring
- Collaborate with statistics professors to aid students in learning course material

### Animal Technician

Feb 2020 – Present

Drew University, Department of Neuroscience

- Follow IACUC protocols to keep the lab in compliance with all relevant federal and state regulations
- Feed, water, and examine rats for signs of illness, disease, or injury
- Clean and disinfect cages and work areas, and sterilize laboratory and surgical equipment
- Record information relating to animal appearance, behavior, breeding, or feeding schedules

## HONORS AND AWARDS

### Outstanding Presentation Award

Awarded Nov 2020

Scholarship of \$200

Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)  
Recognizes the next generation of scientists and STEM leaders for exemplary science, while giving visibility to their investigations and home

### Undergraduate Registration Award

Awarded Sept 2020

Registration funds of \$205

SACNAS

Supports a student to present research at the 2020 SACNAS STEM Conference

### Undergraduate Travel Award

Awarded Nov 2019

Housing funds of \$600

American Society for Microbiology

Supports a student to present research at the Annual Biomedical Research Conference for Minority Students (ABRCMS)

### Travel Grant

Awarded Nov 2019

Registration and travel funds of \$1000

Center for Systems Neurogenetics of Addiction

Supports a student to present NIH funded research under the sub-award from the National Institute on Drug Abuse under federal grant number P50DA039841

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## **Presidential Scholarship**

Awarded Aug 2017, renewed annually

Annual scholarship of \$15,000

Recognizes incoming first-year students with a high school GPA in the A- range in an honors curriculum while achieving an SAT score in the high 1100s (Critical Reading + Mathematics) or a total ACT score of 24

## **Civic Engagement Scholarship**

Awarded Aug 2017, renewed annually

Annual scholarship of \$2,500

Recognizes incoming first-year students who have demonstrated a sustained commitment to community service throughout their high school years

## **H.W. William and Kathleen W. Caming Scholarship**

Awarded Aug 2017, renewed annually

Annual scholarship of \$5,500

Recognizes students who demonstrate academic excellence, financial need, good character, and integrity

## **Freddie and Ada Brown Encouragement Award**

Awarded May 2017

Scholarship of \$200

Recognizes high achieving high-school students, of African American heritage who aspire to a career in the chemical sciences

## **LEADERSHIP AND EXTRACURRICULARS**

### **Black, Indigenous and People of Color (BIPOC) STEM Mentor**

Aug 2020 – Present

Drew University, Office of Diversity & Inclusion

- Provide 1-on-1 mentorship to a Drew BIPOC student
- Advise members of the BIPOC community on selecting courses, research labs, and internships
- Meet bi-weekly to discuss setting goals, developing contacts, and identifying resources

### **NCAA Division III Athlete**

Aug 2017 – 2020

Drew University, Women's cross country

- Maintain rigid practice and workout schedule while working towards personal and team goals
- NCAA DIII National Student-Athlete Advisory Committee member for the 2017 and 2018 season
- Women's cross-country team MVP and top finisher for the 2018 and 2019 season
- All-ECAC honor by virtue of a top-15 finish at the ECAC Championships for the 2018 and 2019 season

### **Civic Scholar**

Aug 2017 – Present

Drew University, Center for Civic Engagement

- *Pangea Housing Assistant*: Designed and facilitated programs for 23 students to promote intercultural learning, QPR Gatekeeper for Suicide Prevention certificated
- *Assistant Track and Field Coach*: Spearheaded and coordinated team workouts for K-8 athletes
- *Program Development Intern* (Students 2 Science, Inc.): Collaborated with program faculty to develop experiments and informational materials for virtual lab sessions for 6-12<sup>th</sup> grade students
- *Brian Awareness Week Coordinator*: Planned a local campaign for college students to increase public awareness of brain research
- Coordinated, Craft for a Cause, a mental health awareness event of 56 attendees