

Violet Kimble

violet.kimble@yale.edu

www.linkedin.com/in/violet-k

https://github.com/VioletKimble

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

EDUCATION

Yale University, New Haven, CT
Ph.D. in Neuroscience

2021 – Present

Drew University, Madison, NJ
B.S. in Neuroscience, with Minor in Statistics

2017 – 2021

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

Neuroscience Research Associate

Sept 2020 – July 2021

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*
- Implement the Rank-Rank Hypergeometric Overlap test using the RRHO R package
- Attend bi-weekly lab meeting to update the lab on my progress

Research Technician; Undergraduate Research Assistant

Jan 2018 – May 2021

Drew University, Department of Neuroscience
Madison, New Jersey

Laboratory of Dr. Christina McKittrick

- Explore *the effect of housing conditions on anxiety behaviors and cocaine-induced sensitized locomotor activity in C57BL/6J mice*
- 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

Biostatistics Research Assistant

Sept 2020 – Jan 2021

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 the Seurat R package
- Attend weekly lab meeting to update the lab on my progress

Bioinformatics Research Associate

Sept 2020 – Jan 2021

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

Laboratory of Dr. Beth Stevens

- Performed single-cell analysis using the Seurat R package to understand the role of disease-associated-microglia in the disease progression of Alzheimer's disease

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- Attend 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 the UPBM R package 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
- 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

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, Hofford RS, Kiraly DD. Microbiome knockdown differentially alters the cortical transcriptomic response to morphine in adolescent and adult mice.

- Virtual Poster: The Friedman Brain Institute 13th Annual Neuroscience Retreat. 2021 Apr 30
- Virtual Poster: Mind, Mood & Microbes: International conference on Microbiota-Gut-Brain axis. 2021 May 19

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

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- 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

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

INVITED TALKS

Neurogenomics: Genetics and Genomics in Neuroscience, BWCB Bioinformatics Bootcamp. Virtual. 2021 Jul 22.

Pathways of Science from College Students' Perspective, Project Interlink for SENDforC's STEM Career Spotlight Series. Virtual. 2021 Apr 2.

My STEM Journey, Project Interlink for SENDforC's STEM Career Spotlight Series. Virtual. 2020 Sept 29.

WORK EXPERIENCE

Student Contact Tracer

Jan 2021 – May 2021

Drew University, Health Service

- Performed phone calls to Drew students and staff who have been exposed to COVID-19 as needed
- Followed regulatory reporting requirements
- Completed the Johns Hopkins University COVID-19 contact tracing course

Technology Specialist

Sept 2017 – Jan 2021

Drew University, Media Resource Center

- Uploaded speech class videos for professors in a timely and efficient manner
- Set up technology during campus events for students and professors

TEACHING EXPERIENCE

Substitute Teacher

Apr 2021 – May 2021

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Perth Amboy School District

- Guided 20- 25 students through planned activities and tend to their physical needs
- Provided individual and group assistance to students with a range of abilities
- Worked with counselors, teachers, parents and support staff to promote positive student behavior

Neuroscience Research Methods Teaching Assistant

Jan 2021 – May 2021

Drew University, Department of Neuroscience

- Oversaw students enrolled in Neur 210 Lab during the lab period
- Demonstrated common laboratory procedures for students to promote understanding of the concepts and skills involved
- Presented mini stats lectures/demos on two-way ANOVA and repeated measure ANOVA

Statistics and Neuroscience Tutor

Aug 2020 – May 2021

Drew University, Center for Academic Excellence

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

HONORS AND AWARDS

Hardin Prize

Awarded May 2021

Drew University

Recognizes one or more graduating seniors whose active and productive participation in the academic and community life of the College best exemplifies the ideals and accomplishments of former President Paul Hardin.

Tracey J. Shors Neuroscience Prize

Awarded May 2021

Drew University

Recognizes an outstanding Drew student for collaborative, multidisciplinary research in the neurosciences.

Senior Recognition Award

Awarded May 2021

Drew University

Recognizes a Senior student who has exhibited outstanding service to the Drew community within their Senior year.

The Gold D

Awarded May 2021

Drew University

Gold D recipients have dedicated themselves to outstanding service for the Drew Community throughout their time at Drew University.

Outstanding Presentation Award (Life Sciences, Genetics)

Awarded Nov 2020

2020 SACNAS - The National Diversity in STEM Virtual Conference

Recognizes the next generation of scientists and STEM leaders from historically excluded populations, while giving visibility to their research and home institutions. The awards also encourage students to continue pursuing the STEM fields.

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Undergraduate Registration Award

Awarded Sept 2020

Registration funds of \$205

Society for the Advancement of Chicanos/Hispanics and Native Americans in Science

Supports a student to present research at the 2020 Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (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

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

PROFESSIONAL ASSOCIATIONS

ALBA Network

Active member: 2021 - Present

Society for Neuroscience

Active member: 2020 - Present

International Behavioral and Neurogenetics Society (IBANGS)

Active member: 2020 - Present

LEADERSHIP AND EXTRACURRICULARS

Lead Membership Coordinator

June 2021 – Present

The Black Women in Computational Biology Network (BWCB)

- Maintain and update over 160 membership records

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- Serve as the main contact person for all member inquiries
- Work closely with other BWCB staff to inform members of services and benefits of membership

Black, Indigenous and People of Color (BIPOC) Community Mentor

Aug 2020 – May 2021

Drew University, Office of Diversity & Inclusion

- Support members of the BIPOC community at Drew University
- Provide 1-on-1 mentorship to a Drew BIPOC student
- 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 work out 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 – May 2021

Drew University, Center for Civic Engagement

- *Virtual Brain Awareness Week Seminar 2021*: Designed and facilitated a project on mental health policy and issue advocacy for 100 college attendees
- *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 6-12th grade students
- Coordinated, Craft for a Cause, a mental health awareness event