

CV

Bre` A. Minniefield

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EDUCATION

University of Alabama at Birmingham	June 2016 – August 2021
Ph.D., Biomedical Science (Genetics/Genomics/Bioinformatics)	
Virginia State University	May 2015
M.S., Biology (Genetics/Bioinformatics)	
Radford University	September 2012
B.S., Biology (General Concentration)	
Lafayette High School	May 2008
Diploma (Advanced Studies)	

PhD. RESEARCH THESIS

2018 – present, *Genomic Background of Blood Pressure Response to Thiazide Diuretics in African Americans*, (Focus on mtDNA influence on metabolic traits in hypertensive African Americans).

M.S. RESEARCH THESIS

05/2013 – 05/2015, *Human Disease Obesity Specific Populations/Ethnicities*, (Focus on African Americans). Configured new methodology for search of novel SNPs loci using Bioinformatics method.

SUMMARY OF EXPERIENCE

Areas of expertise and strengths include:

- College-level teaching (freshman – senior)
- Sterile lab techniques
- Lab testing (cell/bacterial culture, DNA/RNA, STR techniques, plant/water/pH/soil quality, protein purification, drug safety, assays (DNA, RNA, protein, cell), flow cytometry, different staining methods (e.g. crystal violet, wright, ethidium bromide)
- Genetic/Genomic/Epidemiology Association Analysis (GWAS, EWAS)
- Lab machines (running centrifuge, PCR/Microarray, LC/MS, ICP/MS, S/N/W Blot, IN Vitro/Autoclave)
- Analytical software; e.g., R, SPSS, Sequencing tools (Galaxy, SAMtools, BWA, SV-Callers, etc.)
- Coding Language(s): Python, Linux, Perl
- Lab forms/notebooks, data sheets, excel spread-sheet updates
- Wildlife setting (bats/ (black and turkey) vultures/red cockaded woodpeckers/plants (black cohosh, farming crops, wine grapes, native and exotic species) /wetlands/portal searches, telemetry, tagging, surveying, emerging counts, mist netting (of bats and birds))
- Communication qualifications: customer service skills, data entry (in-field and in-lab)
- Customer service (clients, public, landowners, visitors, interested parties)
- Canvas, Blackboard, Microsoft Office programs

RESEARCH EXPERIENCE

08/2016 – present – *Biomedical PhD Candidate (official, Oct. 2019)*, University of Alabama at Birmingham, Birmingham, AL

Conducting scientific research & course work in Genetics/Genomics/Bioinformatics. Duties included:

- Actively involved in course work: passing all courses with a grade of B or higher
- Enhancing known and acquiring new scientific methodologies to use throughout research career
- Secure a “lab home” and develop a research project
- Acquire 1st Author publications (on at least 2 articles)

01/2021 – 05/2021 – *Teaching Fellow*, University of Alabama at Birmingham, Birmingham, AL

Instructing a seminar course; GGSC 320. Duties included:

- Developing and using a syllabus to deliver course content
- Planning, developing, and using a variety of teaching methodologies and materials to provide instruction for different learning styles
- Prepping lectures/activities for students to conduct necessary course tasks
- Developing testing/assignments/projects materials and evaluating students’ performance
- Counseling students and recommending strategies to improve performance Maintaining open communications with students through posted office hours, electronic media, bulletin boards, etc.
- Maintaining student records and submitting reports and forms within requested timeframes

09/2020 & 11/2020 – *Online Instructor*, University of Alabama at Birmingham, Birmingham, AL

Instructing a seminar course; BY 101. Duties included:

- Developing Online Lectures/Activities and Student Evaluations
- Planning, developing, and using a variety of teaching methodologies and materials to provide instruction for different learning styles

01/2020 – 05/2020 – *Teaching Fellow*, University of Alabama at Birmingham, Birmingham, AL

Instructing a seminar course; GGSC 320. Duties included:

- Developing and using a syllabus to deliver course content
- Planning, developing, and using a variety of teaching methodologies and materials to provide instruction for different learning styles
- Prepping lectures/activities for students to conduct necessary course tasks
- Developing testing/assignments/projects materials and evaluating students’ performance
- Counseling students and recommending strategies to improve performance Maintaining open communications with students through posted office hours, electronic media, bulletin boards, etc.
- Maintaining student records and submitting reports and forms within requested timeframes

01/2016 – 05/2016 – *Adjunct Instructor*, Rappahannock Community College, Glenss, VA

Instructing 2 lab courses; BioL 101 & BioL 102. Duties included:

- Developing and using a syllabus to deliver course/lab content
- Planning, developing, and using a variety of teaching methodologies and materials to provide instruction for different learning styles
- Prepping Laboratory space/activities for students to conduct necessary course tasks
- Developing testing materials and evaluating students’ performance

- Counseling students and recommending strategies to improve performance Maintaining open communications with students through posted office hours, electronic media, bulletin boards, etc.
- Maintaining student records and submitting reports and forms within requested timeframes
- Attending faculty meetings and keeping Chair informed of Departmental issues

01/2015 – 05/2015 – *Adjunct Professor*, Virginia State University, Petersburg, VA

As a part of Master’s Program, responsible for teaching *Introduction to Biology Course* to 24 students (freshman – senior). Duties included:

- Developing and using a syllabus to deliver course/lab content
- Planning, developing, and using a variety of teaching methodologies and materials to provide instruction for different learning styles
- Prepping Laboratory space/activities for students to conduct necessary course tasks
- Developing testing materials and evaluating students’ performance
- Counseling students and recommending strategies to improve performance
- Maintaining open communications with students through posted office hours, electronic media, bulletin boards, etc.
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05/2011 – 08/2014 – *Bat Field Technician*, Environmental Solutions, Inc., Cincinnati, OH

Worked as a seasonal employee in a team environment to research and confirm the presence and foraging activity of bats. Work required ongoing communications with Federal, state, and local agencies; landowners; and the public. Duties included:

- Assisting with acoustic monitoring to confirm presence and pinpoint foraging activity
- Setting up and monitoring mist-netting
- Pinpointing foraging locations using radio telemetry
- Handling and identifying bat species
- Assisting with vegetation plot surveys
- Completing fieldwork data forms
- Habitat/wetland assessments

PUBLICATIONS

A 6-CpG Validated Methylation Risk Score Model for Metabolic Syndrome: The HyperGEN and GOLDN Studies https://doi.org/10.1371/journal.pone.0259836	2021
Mitochondrial Haplogroup Association with Fasting Glucose Response in African Americans Treated with a Thiazide Diuretic https://www.biorxiv.org/content/10.1101/2021.10.18.464878v1	2021
Ten Papers to Read: COVID-19: Top 10 Series http://ubrite.informatics.uab.edu/covid19/index.php/ten-list-series/	2020
Ten Paper to Understand: COVID-19: Top 10 Series http://ubrite.informatics.uab.edu/covid19/index.php/ten-list-series/	2020
The Interplay Between the Microbiome and Cardiovascular Risk. <i>Current Medicine Reports</i> https://link.springer.com/article/10.1007/s40142-018-0144-y	2018

PRESENTATIONS

Alabama Academy of Science (AAS) Annual Meeting	2022
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UAB Undergraduates Expo Judge	2021
Oakwood University Seminars	2021
Alabama Academy of Science (AAS) Annual Meeting	2021
UAB GBS Annual Symposium Oral Presentation MetS MRS	2020
3MT for Graduate Biomedical Science PhD Recruitment Dinner	2020
3 Minute Thesis, University of Alabama at Birmingham	2019
UAB Discoveries in the Making “African American Health Matters”	2019
Bioinformatics PowerTalk Series, University of Alabama at Birmingham	2018
Graduate Biomedical Student Symposium, University of Alabama at Birmingham	2017

HONORS & FUNDING

UAB MERIT Scholar	2021
2 nd Place; AAS Annual Meeting	2021
PALM Network Fellowship	2020
NIH-NOA Grant Award #: 3R01HL123782-02S1	2018
Golden Key International Society Member	2016
Magna Cum Laude (3.94 GPA), Virginia State University, Petersburg, VA	2015

CERTIFICATION

Genetics Society of America (GSA) Member	2021
PALM Network Fellow	2020
ROSE Network Member	2020
UAB CIRTl Associate Certificate	2020
UAB CIRTl Professional Development Program Certificate	2019
NHGRI Funded — 7 th Annual Short Course on Next-Generation Sequencing	2017
Collaborative Institutional Training Initiative Certification	2014

TEACHING CLASSES/WORKSHOPS

UAB GRD 764 GBS Individual Teaching Exp. I	2020
UAB GRD 752 CIRTl Seminar on STEM Teaching	2018
UAB GRD 750 CIRTl Sem. Teaching & Learning	2018
UAB GRD 727 Writing & Reviewing Research	2018
UAB GRD 716 Dev. A Teaching Portfolio	2018
UAB GRD Principles of Sci. Integrity	2017

VOLUNTEER & MENTOR ACTIVITIES

UAB-CORD Science Fair Judge	2022
UAB Undergraduate Spring Expo Judge	2021
GBS/GGB Admissions Committee	2021
Lawson State Community College Biology 250 Mentor	2019
UAB Women in STEM Mentor	2018-present
UAB Undergraduate Spring Expo Judge	2018
UAB Entrepreneurship - STEM Enrichment Program	2018
Vice President of GCAT (Graduate Careers & Awareness)	2018-present
Rappahannock Community College Science Tutoring Session	2016
New Zion Baptist Church, Williamsburg, VA (feeding needy & homeless)	2013

Professional References

Dr. Ryan Irvin

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Dr. Dan Bullard

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Nancy Abney

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Dr. Hemant Tiwari

University of Alabama at Birmingham; Birmingham, AL
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Director, Post-Doctoral NHLBI Training Program in Statistical Genetics
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Dr. Elizabeth Worthey

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Lisa Merritt

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Dr. Brian Sayre

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Professor in Biology Department
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