# Randy Parrish

rndparr@gmail.com | randy.parrish@emory.edu | GitHub | Website

## EDUCATION

*MSPH*, Biostatistics                                              Expected May 2021
*Rollins School of Public Health (RSPH), Emory University* | Atlanta, GA
GPA: 3.75

*BS*, Biology (Cellular/Physiology Track)                                    May 2019
*BA*, Mathematics                                                            May 2019
*University of Louisville (UofL)* | Louisville, KY
Minor: Global Public Health | *Cum Laude* | GPA: 3.71

## TECHNICAL SKILLS

- R, Python, Bash, AWK, SAS 9.4
- Linux, HPC Cluster, Sun Grid Engine, parallel computing in R/Python
- MS Office, Zotero reference manager, LaTeX, BibTeX

## RESEARCH EXPERIENCE

Transcriptome-Integrated Genetic Association Resource (TIGAR)      February 2020–Present
Dr. Jingjing Yang | *Emory University* | Atlanta, GA
- preparing/analyzing large multi-omics data in HPC cluster environment
- applying TIGAR tool to GTEx V8 data
- optimizing code to reduce memory consumption and execution time in all TIGAR Python scripts
  - gene expression model training time for TIGAR example data on 1 core reduced from 17+ minutes to <4 for all models

Modeling qPCR Curves                                              August 2018–May 2019
Dr. Gary Cobbs | *UofL* | Louisville, KY
- modified and developed R code to model qPCR curves in order to predict initial absolute concentration of template DNA from raw fluorescence values
- investigated kinetics of primer/probe annealing, processivity in literature
- generated visualizations from model output using ggplot2

Mycobacteriophage Sub-Cluster Distribution & Correlations          August 2012–May 2013
Dr. Claire Rinehart | *Western Kentucky University (WKU)* | Bowling Green, KY
- used Mathematica to analyze geographic distribution of phages and to generate visualizations
- assessed distribution of phage clusters and examined correlation between geographic distance and genetic distance within each cluster

Mycobacteriophage Isolation & Genome Annotation                    August 2011–May 2012
Dr. Rodney King & Dr. Claire Rinehart | *SEA-PHAGES & WKU* | Bowling Green, KY
- isolated a unique mycobacteriophage from the environment
- annotated a section of the genome of a mycobacteriophage with results published in GenBank

## RESEARCH OUTCOMES

Tang, S., **Parrish, R.**, Buchman, A. S., De Jager, P. L., Bennett, D. A., Epstein, M. P., Yang, J. (October, 2020). Powerful variance-component method for TWAS identifies novel and known risk genes for Alzheimer's dementia [Poster Presentation]. ASHG Virtual Meeting 2020.

Staples, A. K., King, R. A., Doughty, M. A., **Parrish, M. L.**, Klann, J. K., Rinehart, C. A., ... Hatfull, G. F. (2017). Mycobacterium phage TinaFeyge, complete genome [Direct Submission]. GenBank: KY471266.1. http://www.ncbi.nlm.nih.gov/nuccore/KY471266.1.

## POSTER PRESENTATIONS

| | |
|---|---|
| Correlation of geographical distribution of mycobacteriophages with genomic clusters and genome distance | May 2013 |

$12^{th}$ *Annual UT-ORNL-KBRIN Bioinformatics Summit* | Buchanan, TN
Abstract: https://doi.org/10.1186/1471-2105-14-S17-A8

| | |
|---|---|
| Mycobacteriophage sub-cluster distribution and correlation to hydrologic regions | November 2012 |

*BISC and HPCC Research Symposium, WKU* | Bowling Green, KY

## EMPLOYMENT

| | |
|---|---|
| Research Assistant | February 2020–Present |

*YangLab, Emory University* | Atlanta, GA

| | |
|---|---|
| Small Group Tutor for Biostatistics & Microbiology | October 2016–April 2018 |

*REACH Learning Resource Center, UofL* | Louisville, KY

| | |
|---|---|
| Emergency Room Scribe | May 2014–September 2014 |

*Norton Healthcare & PhysAssist Scribes* | Louisville, KY

## PROFESSIONAL MEMBERSHIP

| | |
|---|---|
| American Statistical Association | July 2017–Present |

Student Member; Member ID: 207482
- Attended JSM 2017 conference in Baltimore, MD
- Attended JSM 2018 conference in Vancouver, CA

## COMMUNITY INVOLVEMENT

| | |
|---|---|
| Humanitarian Emergencies Research Team (HERT) | October 2019–Present |

GEB Data Analysis and Visualizations Co-Lead | *RSPH, Emory University*

| | |
|---|---|
| Student Outbreak and Response Team (SORT) | October 2019–Present |

Member | *RSPH, Emory University*

| | |
|---|---|
| Summer Institute in Biostatistics (SIBS) | June 2017–July 2017 |

Student | *RSPH, Emory University*

| | |
|---|---|
| Supplies Over Seas (SOS) | July 2017 |

Volunteer

## HONORS

| | |
|---|---|
| • UofL Dean's List | Fall 2016, Spring 2017, Spring 2018 |
| • UofL Dean's Scholar | Fall 2017 |
| • Kentucky Educational Excellence Scholarship | 2013, 2016, 2017 |
| • NCWIT Aspirations in Computing Kentucky Affiliate | 2013 |
| • Everett E. Black Scholarship | 2013 |
| • Illinois Institute of Technology University Scholarship | 2013 |
| • Rose-Hulman Merit Scholarship | 2013 |