

# MEGAN HALL

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## EDUCATION

Barrett, the Honors College

Arizona State University

Aug. 2018-May 2022

Psychology with a concentration in Psychological Science, Bachelor of Science

Anthropology, Bachelor of Science

Certificate in Cross-Sector Leadership

Certificate in Evolutionary Medicine

Cumulative GPA: 3.97/4.00, *summa cum laude*

Honors Thesis: The Effects of a Brief Exposure to Nature or Social Media on Psychological Well-Being

Supervisors: Dr. Virginia S.Y. Kwan, Dr. William Corbin, Dr. Douglas Kenrick, and Samantha L. McMichael

## HONORS AND SCHOLARSHIPS

- **APA Society Convention Research Award** Aug. 2022
  - o *Psi Chi, the International Honor Society in Psychology and the APA Committee on Associate and Baccalaureate Education (CABE)*
- **Division 52 Student Member APA Convention Registration Award** Apr. 2022
  - o *APA Division 52 Student Committee*
- **Nominated to Present Research for Oral Presentation Award** Aug. 2021
  - o *Translational Genomics Research Institute, a part of City of Hope and the Helios Education Foundation*
- **Nominated for Research/Internship Gold Standard Award** May 2020
  - o *Barrett, the Honors College at Arizona State University*
- **Dean's List** Dec. 2018-May 2022
  - o *Arizona State University*
- **New American University Provost's Scholarship** Aug. 2018
  - o *Arizona State University*

## RESEARCH EXPERIENCE

Translational Genomics Research Institute, a part of City of Hope,

Phoenix, AZ

Supervisors: Dr. Kendall Van-Keuren Jensen, Dr. Eric Alsop, Dr. Elizabeth Hutchins

This lab is in the Neurogenomics department and is focused on the characterization of RNA-seq across different biofluids, extracellular vesicles, and determining potential biomarkers for neurological disease using RNA in accessible biofluids

Associate Bioinformatician,

Jun. 2022 – Present

- Helping to improve and maintain a bioinformatics pipeline through the addition of deeptools, updating directory names, and adding exit commands if a file that is required for the next step in the pipeline is not created or has zero bytes
- Analyzing long and smallRNA in various biofluids, such as plasma, urine, and cerebrospinal fluid, and in tissue samples from patients diagnosed with neurological diseases, including schizophrenia, Alzheimer's disease, and Parkinson's disease in the format of heatmaps, stacked barplots, volcano plots, upset plots, waterfall graphs, PCA plots, and many other graphs
- Ran analyses for the purpose of quality control and to help characterize the transcriptome of patients diagnosed with schizophrenia and healthy controls
- Compiled metadata from cognitive assessments for a dataset that includes patients diagnosed with Alzheimer's disease, Parkinson's disease, and healthy controls
- Gave a formal presentation for current Helios Scholars at TGen about my research to help them with their

future presentations and science communication

*Bioinformatics Intern,*

*Aug. 2021 – Jun. 2022*

- Created heatmaps of transposable elements compared to genes in RNA for a presentation
- Coded the force of hits on football players' helmets for a collaborators' dataset
- Used UpSetR to create upset plots of transposable elements across different kits used to test water controls
- Uploaded data from healthy tissue samples to an open source repository for exRNA to increase access to biological sample information for researchers
- Helped integrate two existing pipelines that use Jinja2 and slurm via jetstream to facilitate data processing and analysis
- Made heatmaps using z-scores using ComplexHeatmap to better illustrate findings from DESeq2 in both small RNA and bulk RNA

*Helios Scholar,*

*Jun. 2021 – Aug. 2021*

- Utilized existing GitHub repositories to create a pipeline that would run via jetstream with Jinja2 templates
- Used shell-scripting in BASH to navigate between computer nodes and submit jobs via slurm
- Conducted data analysis, mainly DESeq2 from Bioconductor, in R/RStudio to complete biostatistical analyses of transposable elements
- Utilized pheatmap, EnhancedVolcano, ggplot2, and others to create graphs of transposable elements in R/RStudio
- Spoke to a group about current research on the project including the role of transposable elements, the research found on transposable elements in cerebrospinal fluid and Parkinson's disease, and future directions
- Created and presented a poster, abstract, and oral presentation summarizing the project's background, results, and goals

#### **Culture and Decision Science Network Lab,**

**Tempe, AZ**

Supervisors: Dr. Virginia Kwan, Samantha L. McMichael, Cameron Bunker

This lab is related to personality characteristics and interventions, cyberpsychology, and characteristics of personality applied to the temporal self; one of their major projects is the "Me in 10" project, a longitudinal study of Arizona State University students who began as freshmen in 2016; the study is gathering data on how youth view their future and how this impacts them

*Research Assistant,*

*Sep. 2019-Apr. 2022*

- Coded qualitative statements written by students to themselves in ten years, specifically on how vivid their depiction of their future is, resulting in further progress in research for a graduate student's project
- Utilized SPSS Statistics for correlation tables, moderation analyses, and ANOVA
- Completed an independent project including statistical analysis, a written abstract, and a poster, that was presented online at the SPSP 2021 conference
- Developed an experimental design and manipulation that utilized a survey via Qualtrics, and collected data using an online platform called Amazon Mechanical Turk for an independent thesis
- Presented data analyses in both an APA formatted paper and via a 20 minute oral presentation for an honors undergraduate thesis project

#### **Memory, Attention, and Control Lab (MAC Lab),**

**Tempe, AZ**

Supervisors: Dr. Gene Brewer, Caleb Jerinic-Brodeur

Research in this lab focuses on memory and attention through data such as EEG, pupillometry, and other types of cognitive research

*Research Assistant,*

*Mar. 2022-Apr. 2022*

- Helped with pupillometry data collection for value-based memory and learning
- Read participants' instructions for tasks and ensured they understood the task
- Set up the computers for each participant with preprogrammed tasks that used PsychoPy and/or Gazepoint
- Provided participants with credit for their participation on SONA systems

#### **Evolution, Ecology, and Social Behavior Lab,**

**Tempe, AZ**

Supervisors: Dr. Steven Neuberg, Dr. Douglas Kenrick

Research in this lab uses social psychology from an evolutionary viewpoint. Hypotheses are drawn from anthropological data in the historical record. Stereotypes and prejudices are studied as a form of adaptation to threat, as one example

*Research Assistant,*

*July 2020 – Dec. 2021*

- Interviewed participants over Zoom, resulting in further data collection for a study
- Conducted literature reviews and learned to articulate what was stated in evolutionary science journals
- Coded qualitative data for graduate students' research projects
- Helped with data collection in-person by reading instructions to participants, keeping the environment controlled, and cleaning between data collection

#### **Culture of Context and Positive Development Lab,**

**Tempe, AZ**

Supervisor: Dr. Monica Tsethlikai

This lab uses developmental and biological perspectives to understand how Native American youth use cultural practices as a method of blocking stress, and how these factors play a role in executive function development

*Barrett Fellow,*

*Aug. 2019-Dec. 2019*

- Read research papers on executive function development, specifically pertaining to Native Americans and adolescents
- Graded executive function tests, such as the BRIEF, happy/sad, etc. and input scores to SPSS
- Compiled qualitative information from interviews for a presentation to the Native American community

#### **REACH Institute,**

**Tempe, AZ**

Supervisor: Dr. Nancy Gonzalez

This lab broadly studies Mexican-American youth. I worked on a project funded by the NIH, more specifically on a longitudinal intervention-based study meant to find out how to help Mexican-American youth by looking at familial and genetic influences

*Research Assistant,*

*Jan. 2019-May 2019*

- Interviewed youth and adults in-person and over the phone, increasing the amount of mass data collection
- Completed various office tasks, such as organization of folders and data, resulting in a more thorough collection of data

#### **ORGANIZATIONAL AFFILIATIONS**

##### **Society for Neuroscience**

**Jun. 2022-Present**

Regular Member

##### **Psi Chi International Psychology Honors Society**

**Dec. 2020-Present**

Member

##### **American Psychological Association**

**Apr. 2019-Present**

Student Member

Member of Divisions 8, 40, and 52 at present

*Member of the Division 52 COVID-19 Taskforce*

*Aug 2020-Present*

- Coded articles on COVID-19 and mental health from 30 countries for a quantitative literature review to increase advocacy and awareness of mental health worldwide in reaction to COVID-19; this research was utilized in the format of a symposium and research paper
- A book using the research from this taskforce is currently in-progress

*Member of the Division 52 Student Committee*

*Aug 2020-Present*

- Reviewed submissions for the Student International Research Award and Anastasi Research Award to provide funding for students working on projects that are internationally focused

#### **PREPRINTS, IN-PRESS, AND IN-PREP**

**Hall, M.C., McMichael, S.L., & Kwan, V.S.Y.** (in press). Effects of a Brief Exposure to Nature or Social Media on Psychological Well-Being. *Modern Psychological Studies*. Preprint available at <https://doi.org/10.31234/osf.io/bfpq6>

**Hall, M.C.** (in-press). COVID-19 Testing, Preventive Measures, and Ethical Issues. In H.R. Searight (Ed.), *Covid-19 Health Disparities and Ethical Challenges Across the Globe*. Springer.

Godfrey, R.K., Bjork, R.T., Alsop, E., Ruvalcaba, H.C., Antone, J., Michael, A.F., Williams, C., Hala'ufia, G., Blythe, A.D., **Hall, M.**, Van Keuren-Jensen, K., & Zarnescu, D.Z. (in prep). Modelling dementia in *Drosophila* uncovers shared and specific targets of TDP-43 proteinopathy across ALS and FTD relevant circuits. Preprint

## PRESENTATIONS

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**Hall, M.C.,** Hutchins, E., Bilagody, C., Reiman, R., Antone, J., Logemann, A., Cox, L., Palomares, D.M., Bitzah-Ray, F., & Van Keuren-Jensen, K. (2022, November). An investigation into transposable elements in the transcriptomes of patients diagnosed with neurodegenerative disease and healthy controls in urine and plasma [Conference poster and abstract]. Poster session presented at the fifty-first annual convention of the Society for Neuroscience, San Diego, CA, United States.

**Hall, M.C.,** McMichael, S.L., Dryjanska, L., & Kwan, V.S.Y. (2022, August). Effects of a Brief Exposure to Nature or Social Media [Conference poster and abstract]. Poster session presented at the one-hundred and thirtieth annual convention of the American Psychological Association, Minneapolis, MN, United States.

**Hall, M.C.,** Hutchins, E., Alsop, E., Reiman, R., Bilagody, C., Pilade, J., & Van Keuren-Jensen, K. (2021, August). *The hidden transcriptome in cerebrospinal fluid and an exploration of its role in Parkinson's disease*. [Poster, abstract, and presentation]. Poster and oral presentation presented at the Helios Scholars Intern Symposium, Phoenix, AZ.

Dryjanska, L., & **Hall, M.C.** (2021, July). Addressing Healthcare in the Face of Death and Dying: Snapshots from ten countries. In L. Dryjanska (Chair). *Ethical Dilemmas and Health Care Across the Most Affected Countries During the COVID-19 Pandemic*. [Symposium]. Symposium presented at the thirty-second International Congress of Psychology, Virtual.

Rami, F., & **Hall, M.C.** (2021, July). A Multi-Country Analysis of the Impact of COVID-19. In L. Dryjanska (Chair). *Ethical Dilemmas and Health Care Across the Most Affected Countries During the COVID-19 Pandemic*. [Symposium]. Symposium presented at the thirty-second International Congress of Psychology, Virtual.

Battista, P., & **Hall, M.C.** (2021, July). The Mental Health Impact of the COVID-19 Pandemic: A Multi-Country Analysis. In L. Dryjanska (Chair). *Ethical Dilemmas and Health Care Across the Most Affected Countries During the COVID-19 Pandemic*. [Symposium]. Symposium presented at the thirty-second International Congress of Psychology, Virtual.

**Hall, M.C.,** McMichael, S.L. & Kwan, V.S.Y. (2021, February). *Familism maintains hope despite loss of relatedness to the future self during the COVID-19 pandemic*. [Conference poster and abstract]. Poster session presented at the twenty-second annual convention of the Society for Personality and Social Psychology, Virtual.

## PROFESSIONAL EXPERIENCE

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**HonorHealth Deer Valley** **Phoenix, AZ**  
*Volunteer Generalist,* *Mar. 2022 – Present*

- Spent 4 hours per week at the front desk, helping direct people to their loved ones
- Handled a variety of problems that arose in a forward-facing position in healthcare

**Next Generation Service Corps at Arizona State University,** **Tempe, AZ**  
*Member,* *Aug. 2018-Present*

- Attended seminars and classes designed to improve leadership and thinking across the public, private, and non-profit sectors

*Member of the Disabilities and Empowerment Committee,* *Aug. 2018 – May 2022*

- Created disability advocacy fliers using Canva to increase disability awareness
- Attended service events and learned about disability awareness and advocacy, resulting in growth of my own knowledge of disability awareness and accessibility

*Mentor Coordinator,* *May 2021 – Dec. 2021*

- Sorted Mentors and Mentees and matched them based on their major, campus, interests, etc., resulting in better mentor/mentee relationships
- Created email templates that could be utilized each year to send information to mentors

- Communicated with mentors and mentees in order to facilitate their relationships

#### **Psi Chi at Arizona State University,**

**Tempe, AZ**

*Member,*

*Dec. 2020-May 2022*

*Director of Community Outreach,*

*May 2021-May 2022*

- Took charge of planning service events for Psi Chi
- Worked with other members of the Psi Chi Board to create budgets for events and make events known via newsletters and social media

#### **7 Cups of Tea**

*Active Listener,*

*Sep. 2020 – Dec. 2020*

This online platform is like a crisis textline, but instead it is for those who are not in dire emergency. Volunteers are taught to listen to those who contact us on this platform and help them talk and think through things; they are not trained for crises, which are directed to a licensed therapist.

- Spent approximately 2-4 hours per week online texting with people experiencing distress

#### **Disability Awareness and Advocacy Committee at Arizona State University,**

**Tempe, AZ**

*Co-Chair,*

*Aug. 2018-May 2019*

- Organized documents in a Google Drive, resulting in better organization of the committee's resources
- Created a Google Form to ask about disability stigma, resulting in more awareness of issues on-campus
- Acted as a go-between for Undergraduate Student Government, resulting in further advocacy of the Disability Resource Center's programs for students with disabilities

### **WORK EXPERIENCE**

#### **Barrett, the Honors College at Arizona State University,**

**Tempe, AZ**

*Undergraduate Student Government Barrett Senator,*

*Apr. 2019-May 2020*

- Advocated for students in Barrett, the Honors College through writing and passing legislation against Anti-Semitism, and in support of the autistic community, amongst other things, resulting in a safer community for many ASU students
- Communicated student and faculty concerns to the university clearly
- Effectively took fiscal charge of clubs through appropriations and legislation

#### **EpiFinder Inc.,**

**Scottsdale, AZ**

*Marketing and Sales Intern,*

*May.-Aug. 2019*

- Learned how to use HubSpot without official training to create leads and complete sales calls
- Made cold calls, especially to old leads, essentially bringing back the marketing program
- Took charge of digital marketing for the company using AdobeSpark, Pexels, and HootSuite, without official training, resulting in the creation and maintenance of Facebook, Instagram, and LinkedIn pages
- Wrote blogs for the company website, resulting in increased website traffic and leads
- Created training documentation for every task completed, resulting in the passing on of lost knowledge about marketing and sales to new interns

### **TECHNICAL SKILLS**

- Google Drive/Microsoft Office - Proficient
- Canva Graphic Design – Proficient
- IBM SPSS Statistics - Proficient
- Qualtrics Surveys – Proficient
- R – Proficient packages: tidyverse, dplyr, ggplot2, ggpubr, pheatmap, EnhancedVolcano
- R – Intermediate packages: ComplexHeatmap, UpSetR, DESeq2
- BASH/Shell scripting – Intermediate
- Git/GitHub - Intermediate

### **CERTIFICATIONS**

- IRB Social and Behavioral Research Certification
- Responsible Conduct of Research Certification