

Hayley Anne Sowards

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Education

- 2019 **B.S. Biology (Genetics, Cellular, and Developmental) & Psychology (Double Major)**
Summa Cum Laude
Arizona State University
Tempe, AZ
- 2015 Lakeville North High School
Lakeville, MN

Research Experience

- August 2019 – Present **Intramural Research Training Fellow at the NCI**
Functional analysis of melanoma risk loci
Supervisors: Drs. Kevin Brown and Rebecca Hennessey
- June 2018 – July 2019 **Helios Scholar and Research Technician at TGen**
Early life stress and effects on DNA methylation
Supervisors: Drs. Matt Huentelman and Candace Lewis
Independent Research: Associations Between Corporal Punishment and DNA Methylation in Stress Genes
- March 2017 – May 2019 **Research Assistant for the Arizona Twin Project**
Childhood resilience and risk factors
Supervisors: Drs. Kathryn Lemery-Chalfant, Mary Davis, and Leah Doane
Independent Research: Dynamic Characteristics of Parent-Child Interactions: Mediating Role in Relation Between Parental Catastrophizing and Child Chronic Pain
- August 2016 – August 2018 **Research Assistant for the Shiota Psychophysiological Lab**
Adult attachment, positive emotions, and ingroup relations
Supervisor: Dr. Michelle Shiota
- December 2017 – May 2018 **Special Research Student at the Mayo Clinic**
Identification of multiple myeloma candidate variants

Publications

- Lewis, C.R., Breitenstein, R. S., Henderson-Smith, A., **Sowards, H. A.**, Piras, I. S., Huentelman, M., Doane, L.D. & Lemery-Chalfant, K. (2019) Dopaminergic Gene Methylation is Associated with Cognitive Performance in a Childhood Monozygotic Twin Study. *Epigenetics*, DOI: 10.1080/15592294.2019.1583032
- Lewis, C.R., **Sowards, H. A.**, Huentelman, M. & Lemery-Chalfant, K. (*In Press*) Epigenetic Differences in Inflammation Genes of Monozygotic Twins are related to Parental Emotional Availability and Health. *Brain, Behavior, and Immunity – Health*.
- Lewis, C.R., Breitenstein, R. S., Henderson-Smith, A., **Sowards, H. A.**, Huentelman, M., Doane, L.D. & Lemery-Chalfant, K. (*Under Review*) Epigenetic Consequences of Harsh Parenting: *NR3C1* and other HPA Gene Methylation Profiles in Middle Childhood.

Sowards, H. A., Davis, M., Lemery-Chalfant, K. (*In Preparation*) Dynamic Characteristics of Parent-Child Interactions: Mediating Role in Relation Between Parental Catastrophizing and Child Chronic Pain.

Conference Abstracts

Lewis, C.R., Breitenstein, R. S., Henderson-Smith, A., **Sowards, H. A.**, Huentelman, M., Doane, L.D. & Lemery-Chalfant, K. (2019). Epigenetic Consequences of Harsh Parenting: *NR3C1* and other HPA Gene Methylation Profiles in Middle Childhood, **Behavioral Genetics Association**, Stockholm, Sweden, June 26th - 29th.

Lewis, C.R., Breitenstein, **Sowards, H. A.**, Huentelman, M. & Lemery-Chalfant, K. (2019) Early Parental Warmth Shapes General Health and Immune Epigenetics in Middle Childhood, **Society for Neuroscience**, Chicago, IL, Oct 19th - 23rd.

Poster Presentations (Presentation/Author)

Sowards, H. A., Hennessey, R. C., Brown, K. B. (April 2020) Fine-mapping and functional analysis of multiple causal variants at the 9p21.3 melanoma risk locus. **NIH Postbaccalaureate Poster Day**, Bethesda, MD.

Sowards, H. A., Lewis, C. R., Breitenstein, R. S., Henderson-Smith, A., Doane, L.D., Lemery-Chalfant, K., & Huentelman, M. (October 2018) Associations Between Corporal Punishment and DNA Methylation in Stress Genes. **AZBio Awards**, Phoenix, AZ.

Sowards, H. A., Lewis, C. R., Breitenstein, R. S., Henderson-Smith, A., Doane, L.D., Lemery-Chalfant, K., & Huentelman, M. (July 2018) Associations Between Corporal Punishment and DNA Methylation in Stress Genes. **Helios Scholars at TGen Research Symposium**, Phoenix, AZ.

Lewis, C. R., Henderson-Smith, A., Styles, R., **Sowards H. A.**, Doane, L., Lemery-Chalfant, K., Huentelman, M. (October 2018) KIBRA gene (WWC1) methylation is associated with cognitive performance in childhood. Poster #1918, **Presented at the 68th Annual Meeting of The American Society of Human Genetics (ASHG)**, San Diego, CA.

Oral Presentations

“Associations Between Corporal Punishment and DNA Methylation in Stress Genes” (July 2018; **\$250**) **Helios Scholars at TGen Research Symposium**, Phoenix, AZ.

“Integrity in the Biosciences” (October 2018) Future Leader Presented by Helios at the **8th Integrity Summit**, Phoenix, AZ.

Mentoring Experience

Helios Scholars: co-mentored two undergraduate students

June 2019 – July 2019

Teaching Experience

Teaching Assistant: Physiological Psychology
Supervisor: Dr. Eevin Jennings

January 2019 – May 2019

Teaching Assistant: Psychology Writing Center
Supervisor: Dr. Carolyn Cavanaugh-Toft

August 2017 – December 2017

Volunteer Experience

Maryland Science Olympiad

February 2020

North Star Tutoring

November 2019 – Present

Task Manager for the Arizona Psychology

Undergraduate Research Conference (AZPURC)

October 2018 – February 2019

Sun Devil Safety Network Advisor

March 2016 – May 2019

Southwest Center for HIV/AIDS

March 2017 – May 2017

Awards

Cancer Research Training Award

2019 – 2021

College of Liberal Arts and Sciences Student Leader

2018

Selected Speaker at the TGen Helios Scholars Symposium

2018

ASU Alumni Association Legacy Scholarship

2017 & 2018

John W. Reich Prize in Applied Social Psychology

2018

Dean's Scholarship

2015 – 2019

Dean's List (> 3.5 GPA for semester)

2016 – 2019