

## CURRICULUM VITAE

### Hayley Anne Sowards

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#### Education

**B.S. Biology (Genetics, Cellular, and Developmental) & Psychology (Double Major)** 2019

*Summa Cum Laude*

Arizona State University

Tempe, AZ

Lakeville North High School

Lakeville, MN

2015

#### Research Experience

**Intramural Research Training Fellow at the NCI**

August 2019 – Present

Functional analysis of melanoma risk loci

Supervisors: Drs. Kevin Brown and Rebecca Hennessey

**Helios Scholar and Research Technician at TGen**

June 2018 – July 2019

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

**Research Assistant for the Arizona Twin Project**

March 2017 – May 2019

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

**Research Assistant for the Shiota Psychophysiological Lab**

August 2016 – August 2018

Adult attachment, positive emotions, and ingroup relations

Supervisor: Dr. Michelle Shiota

#### 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. (*In Press*) Epigenetic Consequences of Harsh Parenting: *NR3C1* and other HPA Gene Methylation Profiles in Middle Childhood. *Cellular and Molecular Neurobiology*.

## 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 26<sup>th</sup> - 29<sup>th</sup>.

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 19<sup>th</sup> - 23<sup>rd</sup>.

## 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**

**North Star Tutoring**

**Task Manager for the Arizona Psychology**

**Undergraduate Research Conference (AZPURC)**

**Sun Devil Safety Network Advisor**

**Southwest Center for HIV/AIDS**

**February 2020**

**November 2019 – Present**

**October 2018 – February 2019**

**March 2016 – May 2019**

**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**