

CURRICULUM VITAE

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

- 8/19 – Present** **Intramural Research Training Fellow at the National Cancer Institute, Division of Cancer Epidemiology and Genetics** Fine-mapping and functional analysis of common melanoma risk loci; Supervised by Drs. Kevin Brown and Rebecca Hennessey, Bethesda, MD
- 6/18 – 7/19** **Helios Scholar and Research Technician at the Translational Genomics Research Institute (TGen)**, Early life stress and effects on DNA methylation; Supervised by Drs. Matt Huentelman and Candace Lewis; **Independent research** - Associations between corporal punishment and DNA methylation in stress genes, Phoenix, AZ
- 3/17 – 5/19** **Research Assistant for the Arizona Twin Project**, Childhood resilience and risk factors; Supervised by Drs. Kathryn Lemery-Chalfant, Mary Davis, and Leah Doane; **Undergraduate thesis** - Dynamic characteristics of parent-child interactions: Mediating role in relation between parental catastrophizing and child chronic pain, Arizona State University, Tempe, AZ
- 8/16 – 8/17** **Research Assistant for the Shiota Psychophysiological Lab**, Adult attachment, positive emotions, and ingroup relations; Supervised by Dr. Michelle Shiota, Arizona State University, Tempe, AZ

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. (2020) Epigenetic differences in inflammation genes of monozygotic twins are related to parental emotional availability and health. *Brain, Behavior, and Immunity – Health*, DOI: 10.1016/j.bbih.2020.100084
- Lewis, C.R., Breitenstein, R. S., Henderson-Smith, A., **Sowards, H. A.**, Huentelman, M., Doane, L.D. & Lemery-Chalfant, K. (2020) Harsh parenting predicts novel HPA receptor gene methylation and NR3C1 methylation predicts cortisol daily slope in middle childhood. *Cellular and Molecular Neurobiology*, DOI: 10.1007/s10571-020-00885-4

Poster Presentations (Presentation/Author)

Sowards, H. A., Hennessey, R. C., Zhang, T., Xu, M., Thakur, R., Law, M. H., Choi, J. C. Brown, K. M. (October 2020) Fine-mapping and functional analysis of multiple causal variants at the 9p21.3 melanoma risk locus containing *CDKN2A* and *MTAP*; Poster #1918. **70th Annual Meeting of The American Society of Human Genetics**, Virtual Meeting.

Sowards, H. A., Hennessey, R. C., Brown, K. M. (April 2020) Fine-mapping and functional analysis of multiple causal variants at the 9p21.3 melanoma risk locus. **National Institutes of Health 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.

Conference Abstracts (Presentation/Author)

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.

Oral Presentations

“Dynamic characteristics of parent-child interactions: Mediating role in relation between parental catastrophizing and child chronic pain” (April 2019) Undergraduate Honors Thesis Defense, Arizona State University, Tempe, AZ.

“Associations between corporal punishment and DNA methylation in stress genes” (July 2018) 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

6/19 – 7/19 Helios Scholars at TGen: co-mentored two undergraduate students

Teaching Experience

- 1/19 – 5/19 Teaching Assistant for Physiological Psychology; Supervised by Dr. Eevin Jennings, Arizona State University
- 8/17 – 12/17 Teaching Assistant for Psychology Writing Center; Supervised by Dr. Carolyn Cavanaugh-Toft

Volunteer Experience

- 11/19 – Present North Star Tutoring (in-person and virtual)
- 2/2020 Maryland Science Olympiad event manager
- 10/18 – 2/19 Task manager for the Arizona Psychology Undergraduate Research Conference
- 3/16 – 5/19 Sun Devil Safety Network advisor for survivors of sexual harassment/assault
- 3/17 – 5/17 Creation of educational materials for the Southwest Center for HIV/AIDS

Awards

- 2019 – 2021 Cancer Research Training Award
- 2018 College of Liberal Arts and Sciences Student Leader
- 2018 Selected Speaker at the TGen Helios Scholars Symposium
- 2017 & 2018 ASU Alumni Association Legacy Scholarship
- 2018 John W. Reich Prize in Applied Social Psychology
- 2015 – 2019 Dean's Scholarship
- 2016 – 2019 Dean's List (> 3.5 GPA for semester)

References

Dr. Kevin Brown

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