

CURRICULUM VITAE
EMILY E BROWN

Department of Biological Sciences
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CURRENT POSITION

2022 – present **Graduate Student Researcher**
Advisor: Dr. Sarah Hainer. Department of Biological Sciences, University of Pittsburgh
Investigating the function of the BAF complex in neural development.

EDUCATION

Ongoing **Ph.D., Integrative Systems Biology** University of Pittsburgh School of Medicine.

2020 **B.S., Microbiology** University of Pittsburgh.
Department of Biological Sciences
Minor in Chemistry, Certificate in Global Health

PREVIOUS POSITIONS

Aug. 2020 –
Aug. 2022 **Research Specialist II**
Advisor: Dr. Sarah Hainer. Department of Biological Sciences, University
of Pittsburgh
Investigating the function of the BAF complex in neural development.

Sept. 2019 –
Apr. 2020 **Undergraduate Researcher**
Advisor: Dr. Jim Peterson and Dr. Linda Pearce. Department of
Environmental and Occupational Health, University of Pittsburgh School of
Public Health.
*Testing synergism of gallium and nitrite compounds as a potential novel antibiotic
treatment for Pseudomonas aeruginosa infections in Galleria mellonella.*

Aug. 2017 –
Jul. 2018 **Research Extern**
Advisor: Dr. Dana Bovbjerg. Department of Biobehavioral Oncology,
University of Pittsburgh Hillman Cancer Center.
Investigating the effect of brief stresses on DNA integrity in BRCA1/2 positive individuals.

Aug. 2017 –
Dec. 2017 **Undergraduate Student**
Professor: Dr. Jeffrey Hildebrand. Department of Biological Sciences,
University of Pittsburgh.
*Investigating the role of the Shortstop protein on the Shroom induced phenotype in
the wing and eye of Drosophila melanogaster.*

PUBLICATIONS

H Zou, B Poore, **EE Brown**, J Qian, B Xie, V Razskazovskiy, D Ayrapetian, E Asimakidou, V Sharma, S Xia, F Liu, A Chen, Y Guan, Z Li, S Wanggou, X Wu, O Saulnier, M Ly, W Fellows-Mayle, G Xi, T Tomita, A Resnick, SC Mack, EH Raabe, CG Eberhart, D Sun, BE Stronach, S Agnihotri, G Kohanbash, S Lu, K Herrup, JN Rich, GK Gittes, A Broniscer, Z Hu, X Li, IF Pollack, RM Friedlander, SJ Hainer, MD Taylor, B Hu. A neurodevelopmental epigenetic programme mediated by SMARCD3-DAB1-Reelin signaling is hijacked to promote medulloblastoma metastasis. *Nature Cell Biology*. 2023 Feb 27. PubMed PMID: 36849558; PubMed Central PMCID: [PMC10014585](https://pubmed.ncbi.nlm.nih.gov/36849558/)

POSTER PRESENTATIONS

University of Pittsburgh School of Medicine PhD Programs Annual Retreat. "Investigating the role of the mSWI/SNF (BAF) nucleosome remodeling complex in regulating neural cell differentiation", Pittsburgh, PA, USA. May 2023.

University of Pittsburgh Department of Pathology Annual Retreat. "Investigating the role of the mSWI/SNF (BAF) nucleosome remodeling complex in regulating neural cell differentiation", Pittsburgh, PA, USA. May 2023.

McGowan Institute for Regenerative Medicine Annual Retreat. "Investigating the role of the mSWI/SNF (BAF) nucleosome remodeling complex in regulating neural cell differentiation", Pittsburgh, PA, USA. March 2023.

Undergraduate Research Symposium. "The Role of Shortstop on the Shroom induced phenotype in the Wing and Eye of *Drosophila*", Pittsburgh, PA, USA. December 2017.

AWARDS AND FELLOWSHIPS

2022 – 2024	CATER T32 Fellowship , McGowan Institute for Regenerative Medicine
2020	Interdisciplinary Undergraduate Research Fellowship , University of Pittsburgh Honors College
2019	Pitt in Ecuador Public Health Study Abroad Scholarship , University of Pittsburgh Global Experiences Office
2018	Connections4Health Community Health Fellowship
2016 – 2020	Dean's List , University of Pittsburgh Dietrich School of Arts and Sciences

PROFESSIONAL MEMBERSHIPS

2020 – Present	Member, Phi Beta Kappa National Academic Honors Society
2019 – Present	Member, Women in Biology (WIB) Pittsburgh Chapter
2017 – 2018	Member, Nu Rho Psi National Honors Society University of Pittsburgh Chapter

VOLUNTEER AND LEADERSHIP EXPERIENCE

Organization	Role	Academic Year(s)
Promoting PEERS , University of Pittsburgh Dept. of Biological Sciences	Website developer	2022 – 2023
University of Pittsburgh School of Medicine PhD Programs Retreat Organizing Committee	Member	2022 – 2023
Global Public Health Brigades , University of Pittsburgh Chapter	Co-president Member	2018 – 2019 2016 – 2018
University of Pittsburgh Outdoors Club	Backpacking chair	2017 – 2019
Connections4Health , Northside Christian Health Center Pittsburgh, PA	Community Health Fellow	2018
Alternative Spring Break , PittServes Office of Student Affairs	Student volunteer	2017
Camp Christopher , Bath, OH	Resident Camp Counselor	2016-2017

MENTORING EXPERIENCE

- Sarah Tripplehorn, PhD Student, Sept – present
Mammalian stem cell culture
- Kya Foxx, Undergraduate Student, June – present
CRISPR/Cas9 gRNA cloning, mammalian stem cell culture
- Braulio Bonilla, Post-Doc, Jan 2021
Mammalian stem cell culture, RNA extraction, RTqPCR, Data Analysis
- Santana Lardo, Research Specialist II, December 2020
Data Analysis, Computational Skills
- Trirupa Chakraborty, Rotation Student, Sept 2021
RTqPCR, Data Analysis

TECHNICAL SKILLS

- Mammalian Stem Cell Culture and differentiation
- CRISPR/Cas9 gRNA cloning
- DNA and RNA library build
- RNA and Protein extraction
- Western Blot
- RTqPCR
- CUT&RUN
- CUT&Tag
- Nascent RNA-seq (TT-seq)
- ATAC-seq
- R and Unix applications for deep sequencing data analysis
- PCR
- Gel electrophoresis
- Bacterial culture
- Yeast cell culture
- Miniprep/Miraprep
- Microscopy and Spectrophotometry
- Microsoft Programs
- Clinical Research