

**CURRICULUM VITAE**  
**SARAH J HAINER, Ph.D.**

Department of Biological Sciences  
Dietrich School of Arts and Sciences, University of Pittsburgh  
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**CURRENT POSITION**

2018 – present      **Assistant Professor**  
Department of Biological Sciences, University of Pittsburgh

2021 – present      **Member**  
University of Pittsburgh Medical Center Hillman Cancer Center

2023 – present      **Leader**  
Center for Transcriptional Medicine, University of Pittsburgh

**EDUCATION**

2012                      **Ph.D., Molecular, Cell, and Developmental Biology** University of Pittsburgh.  
Department of Biological Sciences

2007                      **B.S., Molecular Biology** University of Pittsburgh.  
Department of Biological Sciences

**PREVIOUS POSITIONS**

Sept. 2012 –              **Postdoctoral Research Scholar**  
Dec. 2017              Advisor: Dr. Thomas G. Fazio. Department of Molecular, Cell, and Cancer Biology,  
University of Massachusetts Medical School.  
*The Role of esBAF in Regulating ncRNA mediated Gene Expression in ES cells.*

Aug. 2007 –              **Doctoral Student**  
Aug. 2012              Advisor: Dr. Joseph Martens. Department of Biological Sciences, University of  
Pittsburgh. *The Contribution of Chromatin and Chromatin Associated Factors to  
Transcription Regulation in Saccharomyces cerevisiae*

Sept. 2004 –              **Undergraduate Researcher**  
Aug. 2007              Advisor: Dr. Jeffrey Lawrence. Department of Biological Sciences, University of  
Pittsburgh. *The Influence of Protozoan Predation on Antigenic Diversity in Salmonella  
enterica*

**ACTIVE GRANTS**

	<b><u>Years</u></b>	<b><u>Total Direct Costs (to Hainer)</u></b>
<b>R35GM133732, Research Grant.</b> “Chromatin-mediated mechanisms of transcription regulation in ES cells.” National Institute of General Medicine, NIH, R35. <b>Role: PI</b>	2019 – 2024	\$1,250,000
<b>Administrative Supplement.</b> For R35GM133732, “Chromatin-mediated mechanisms of transcription regulation in ES cells.” National Institute of General Medicine, NIH, R35.	2023 – 2024	\$120,000
<b>R37CA263622, Research Grant.</b> “The prognostic significance and	2021 – 2026	\$175,000

mechanistic determination of chromatin remodeling biomarkers in non-functional pancreatic neuroendocrine tumor” National Cancer Institute, NIH R01. <b>Role: col (PI: Singhi, Pitt)</b>		
<b>R21CA261737, Research Grant.</b> “Using nanobodies to increase the sensitivity and resolution of chromatin profiling through uliCUT&RUN”. National Cancer Institute, NIH R21. <b>Role: PI</b>	2021 – 2024	\$200,000
<b>R01CA262316, Research Grant.</b> “Co-regulation of alternative lengthening of telomeres and chromatin dynamics in ATRX-DAXX deficient cancer cells” National Cancer Institute, NIH R01. <b>Role: coPI (PI: O’Sullivan, Pitt)</b>	2022 – 2027	\$190,176
<b>2205148, Research Grant.</b> “Machine-learning aided morphodynamics characterization of stem cell differentiation using label-free microscopies, NSF. <b>Role: coPI (PI: Xing, Pitt)</b>	2022 – 2024	\$80,000
<b>R01NS126193, Research Grant.</b> “Elucidating regulatory mechanisms of Lamin B1 expression in Autosomal Dominant Leukodystrophy” NCI NIH R01. <b>Role: coPI (PI: Padiath, Pitt)</b>	2023 – 2025	\$196,790
<b>R01HD108222, Research Grant.</b> “Hippo-regulated establishment of pluripotency in vivo” NICHD NIH R01. <b>Role: coPI (PI: Ralston, MSU)</b>	2022 – 2027	\$250,000

**PREVIOUSLY FUNDED GRANTS**

	<b><u>Years</u></b>	<b><u>Total Direct Costs (to Hainer)</u></b>
<b>R01CA254112, Research Grant.</b> “Imaging nanoscale chromatin folding in early carcinogenesis”. National Cancer Institute, NIH, R01. <b>Role: coPI (PI: Liu)</b>	2020 – 2023	\$136,626
<b>Equipment Supplement.</b> For R35GM133732, “Chromatin-mediated mechanisms of transcription regulation in ES cells.” National Institute of General Medicine, NIH, R35.	2022	\$13,844
<b>R01HL153400, Research Grant.</b> “Role of FBXO24 mediated ubiquitination of FoxP1 protein in the pathogenesis and treatment of COPD” NIH, R01. <b>Role: col (PI: Chandra)</b>	2020 – 2023	\$7,200
<b>Research Grant.</b> “Determining gene expression control during neural differentiation through coupled protein localization and RNA-seq in single cells” University of Pittsburgh Momentum Funds <b>Role: PI</b>	2021 – 2022	\$18,000
<b>Research Grant.</b> “Investigating the role of overlapping dinucleosomes in gene regulation.” University of Pittsburgh Central Research Development Fund. <b>Role: PI</b>	2019 – 2021	\$18,000
<b>Research Grant.</b> “Determining BAF complex function during neural development.” Whitehall Foundation. <b>Role: PI</b>	2019 – 2020	\$68,825
<b>Research Grant.</b> “Mechanosensitive orchestration of transcriptional program of MKL coupling to selective autophagy-driven regulation of cell migration”. University of Pittsburgh Collaborative Fund. <b>Role: MPI</b>	2019 – 2020	\$10,000
<b>New Investigator Award.</b> “Building a network of ncRNA regulation”. Charles E. Kaufman Foundation. <b>Role: PI</b>	2018 – 2020	\$136,364
<b>Research Grant.</b> “Determining the Role of the Essential Elongation Factor Spt16 in Embryonic Stem Cell Pluripotency”. Samuel and Emma Winters Foundation, Pittsburgh, PA. <b>Role: PI</b>	2018 – 2019	\$10,600
<b>CDP-8895-16, Special Fellow.</b> “Role of Nucleosome Remodeling Factors in Regulating ncRNA Expression”. Leukemia and Lymphoma Society, Career Development Grant. <b>Role: PI.</b>	2016 – 2019	\$185,715

**SUBMITTED/PENDING GRANTS**

None currently

**Years****Total Direct  
Costs****AWARDS AND FELLOWSHIPS****Year(s)**

<b>Iris Marion Young Award for Political Engagement</b> , University of Pittsburgh	2021
University nominee for <b>Pew Biomedical Scholar</b>	2020
University nominee for <b>Johnson&amp;Johnson WiSTEM<sup>2</sup>D Scholars Award</b>	2020
<b>“Most Valuable Professor”</b> , Awarded by University of Pittsburgh Women’s Diving Team	2020
University nominee for <b>Edward Mallinckrodt, Jr Foundation Scholar Program</b>	2019
University nominee for <b>Johnson&amp;Johnson WiSTEM<sup>2</sup>D Scholars Award</b>	2019
University nominee for <b>Packard Fellowships for Science and Engineering</b>	2019
Nominee for <b>Arnold and Mabel Beckman Foundation Young Investigator Award</b>	2018
<b>Leukemia and Lymphoma Special Fellow</b> , Postdoctoral Fellowship/Transition Award	2016 – 2019
<b>Leukemia and Lymphoma Fellow</b> , Postdoctoral Fellowship Award	2013 – 2016
<b>Postdoctoral Training Program Fellowship (T32)</b> , Postdoctoral Fellowship at the University of Massachusetts Medical School	2012 – 2013
<b>Andrew P. Mellon Predoctoral Fellowship</b> , Mellon Foundation	2011 – 2012
<b>Mary P. Edmonds Graduate Student Award</b> , University of Pittsburgh, Department of Biological Sciences	2011
<b>Outstanding Presentation Award</b> , University of Pittsburgh, Dietrich School of Arts and Sciences	2011
<b>Honorable Mention for Poster and Poster Presentation</b> , Pennsylvania State University Summer Symposium on Chromatin and Epigenetics	2011
<b>Pisum Prize Poster Award</b> . University of Pittsburgh, Department of Biological Sciences	2010
<b>Samuel D. Colella Award for Undergraduate Research</b> . University of Pittsburgh, Department of Biological Sciences	2006

**PUBLICATIONS**

C Viner, CA Ishak, J Johnson, NJ Walker, H Shi, MK Sjoberg-Herrera, SY Shen, **SM Lardo**, DJ Adams, AC Ferguson-Smith, DD de Carvalho, **SJ Hainer**, TL Bailey, MM Hoffman. Modeling methyl-sensitive transcription factor motifs with an expanded epigenetic alphabet. *Genome Biology*. 2024; 25(1):11.

**DC Klein, SM Lardo, SJ Hainer**. The ncBAF complex regulates transcription in AML through H3K27ac sensing by BRD9. *Cancer Research Communications*. 2023.

B Nmezi, G Rodriguez Bey, T DeFrancesco Oranburg, K Dudnyk, **SM Lardo**, N Herdman, A Jacko, S Rubio, EL Alcocer, J Kofler, D Kim, J Rankin, E Kivuva, N Gutowski, K Schon, J van den Ameerle, PF Chinnery, SB Sousa, F Palavra, C Toro, FP e Vairo, J Saute, L Pan, M Alturkustani, R Hammond, F Gros-Louis, M Gold, Y Park, G Bernard, R Raininko, J Zhou, **SJ Hainer**, Q Padiath: An oligodendrocyte silencer element provides a framework to assess the pathogenic impact of lamin B1 structural variants. In revision for *Nature Communications*; *bioRxiv*: <https://doi.org/10.1101/2023.08.03.551473>

**DC Klein, SM Lardo, KN McCannell, SJ Hainer**. FACT maintains pluripotency factor expression through proximal and gene-distal regulation in embryonic stem cells. *BMC Biology*. 2023; 21,167

**DC Klein, K Troy, SA Tripplehorn, SJ Hainer**. The esBAF and ISW1 nucleosome remodeling complexes influence occupancy of overlapping dinucleosomes and fragile nucleosomes in murine embryonic stem cells. *BMC Genomics*. 2023; 24,201

H Zou, B Poore, **EE Brown**, J Qian, B Xie, V Razskazovskiy, D Ayrapietian, 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, AC 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 signalling is hijacked to promote medullablastoma metastasis. *Nature Cell Biology*. 2023 Mar;25(3):493-507

\*denotes co-corresponding authors

C McCann, M Quinteros, I Adelugba, M Morgada, AR Castelblanco, EJ Davis, A Lanzirotti, **SJ Hainer**, A Vila, P Cobine, JG Navea, T Padilla-Benavides. The mitochondrial Cu<sup>+</sup> transporter PiC2 (Slc25a3) is a target of MTF1 required for development of skeletal muscle in vitro by contributing to cytochrome c oxidase metallation. *Frontiers in Molecular Biosciences*. 2022 Nov 9;9:1037941

**SM Lardo** and **SJ Hainer**. Single cell factor localization on chromatin using ultra-low input cleavage under targets and release using nuclease. *J. Vis. Exp.* 2022; (180), e63536.

**BJ Patty** and **SJ Hainer**. Transcription factor chromatin profiling genome-wide using uliCUT&RUN in single cells and individual blastocysts. *Nature Protocols*. 2021; 16:2633-2666

J Xu, H Ma, H Ma, W Jiang, M Duan, S Zhao, C Gao, E-R Hahm, **SM Lardo**, **K Troy**, M Sun, R Pai, DB Stolz, S Singh, RE Brand, DJ Hartman, J Hu, **SJ Hainer\***, Y Liu\*. Super-resolution imaging reveals the evolution of higher-order chromatin folding in early carcinogenesis. *Nature Communications*, 2020 April 20; 11(1): 1899

\*denotes co-corresponding authors

RM Florentino, NA Fraunhofer, N Agarwal, K Takeishi, A Ostrowska, AC l'Hortet, J Guzman-Lepe, K Morita, **K Troy**, WM Mars, S Paranjpe, GK Michalopoulos, A Bell, **SJ Hainer**, IJ Fox, A Soto-Gutierrez Cellular location of HNF4a is linked with terminal liver failure in humans. *Hepatology Communications*, 2020 April 21; 4(6):859-875

C Tavera-Montanez\*, **SJ Hainer\***, D Cangussu, SJV Gordon, Y Xiao, P Reyes-Gutierrez, AN Imbalzano, JG Navea, TG Fazzio, T Padilla-Benavides. The classic metal-sensing transcription factor MTF1 promotes myogenesis in response to copper. *FASEB J*. 2019 Dec; 33(12):14556-14574

\*denotes co-first authors

**SJ Hainer\***, A Boskovic, KN McCannell, OJ Rando, TG Fazzio\*. Profiling of pluripotency factors in individual stem cells and early embryos. *Cell*. 2019 May 16; 177(5):1319-1329

\*denotes co-corresponding authors

**SJ Hainer\*** and TG Fazzio\*. "High Resolution Chromatin Profiling using CUT&RUN". *Current Protocols Molecular Biology*. 2019 April;126(1):e85

\*denotes co-corresponding authors

### Preview and Review articles:

**BJ Patty** and **SJ Hainer**. Non-Coding RNAs and Nucleosome Remodeling Complexes: An Intricate Regulatory Relationship. *Biology*. 2020 August 6; 9(8): 213.

**K Troy**, Y Liu\*, **SJ Hainer\***. PathSTORM: a road to early cancer detection. *Molecular & Cellular Oncology* 2020; 7:5

\*denotes co-corresponding authors

**SJ Hainer\*** and CD Kaplan\*. Specialized RSC: substrate specificities for a conserved chromatin remodeler. *BioEssays*. 2020 July; 42(7):e2000002

\*denotes co-corresponding authors

**DC Klein** and **SJ Hainer**. Genomic Methods in Profiling DNA Accessibility and Factor Localization. *Chromosome Res*, 2020 Mar; 28 (1): 69-85

**Book Chapter:**

**DC Klein and SJ Hainer.** Chromatin Regulation and Dynamics in Stem Cells. *Current Topics in Developmental Biology*, 2020;138:1-71

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**Publications Prior to University of Pittsburgh Appointment:**

- D Acharya, **SJ Hainer**, Y Yoon, F Wang, I Bach, JA Rivera-Perez, TG Fazio. KAT-independent gene regulation by Tip60 promotes ESC self-renewal but not pluripotency. *Cell Reports*. 2017 19: 671-679
- SJ Hainer**, KN McCannell, J Yu, L Ee, LJ Zhu, OJ Rando, TG Fazio. DNA methylation directs genomic localization of Mbd2 and Mbd3 in ES cells. *Elife*. 2016 Nov 16;5.
- SJ Hainer** and JA Martens. Regulation of chaperone binding and nucleosome dynamics by key residues within the globular domain of histone H3. *Epigenetics & Chromatin*. 2016 Apr 30;9:17.
- SJ Hainer** and TG Fazio. Regulation of Nucleosome Architecture and Factor Binding Revealed by Nuclease Footprinting of the ESC Genome. *Cell Reports*. 2015 Oct 6;13(1):61-9
- SJ Hainer**, W Gu, BR Carone, BL Landry, OJ Rando, CC Mello, TG Fazio. Suppression of pervasive noncoding transcription in embryonic stem cells by esBAF. *Genes & Dev*. 2015 Feb 15;29(4): 362-378
- PB Chen, LJ Zhu, **SJ Hainer**, KN McCannell, TG Fazio. Unbiased chromatin accessibility profiling by RED-seq uncovers unique features of nucleosome variants in vivo. *BMC Genomics*. 2014 15:1104
- BR Carone, JH Hung, **SJ Hainer**, MT Chou, DM Carone, Z Weng, TG Fazio, OJ Rando. High-resolution mapping of chromatin packaging in mouse embryonic stem cells and sperm. *Dev Cell*. 2014 Jul 14: 11-22
- SJ Hainer**, BA Charsar, SB Cohen, JA Martens. Identification of mutant versions of the Spt16 histone chaperone that are defective for transcription-coupled nucleosome occupancy in *Saccharomyces cerevisiae*. *G3 (Bethesda)*. 2012 May 2:555-567
- JA Pruneski, **SJ Hainer**, KO Petrov, JA Martens. The Paf1 complex represses *SER3* transcription in *Saccharomyces cerevisiae* by facilitating intergenic transcription-dependent nucleosome occupancy of the *SER3* promoter. *Eukaryotic Cell*. 2011 Oct;10(10):1283-94
- SJ Hainer** and JA Martens. Identification of histone mutations that are required for transcription-coupled nucleosome occupancy. *Mol Cell Biol*. 2011 Sep;31(17):3557-68
- SJ Hainer** and JA Martens. Transcription of ncDNA across regulatory sequences: many roads lead to local gene regulation. *Transcription*. 2011 May/June 2(3):120-123
- SJ Hainer**, JA Pruneski, RD Mitchell, R Monteverde, JA Martens. Intergenic transcription causes repression by directing nucleosome assembly. *Genes & Dev*. 2011 Jan 1;25(1):29-40

**POPULAR PRESS**

Profiling of pluripotency factors in individual stem cells and early embryos **F1000 prime**, January 20, 2020  
<https://f1000.com/prime/735454597?key=6BinNspQcDOrOS>

“**uliCUT&RUN maps protein binding on chromatin in single cells and single embryos**”, EurekAlert!. April 8, 2019. [https://eurekalert.org/pub\\_releases/2019-04/uop-ump040819.php](https://eurekalert.org/pub_releases/2019-04/uop-ump040819.php)

**INVITED PRESENTATIONS**

- UMass Chan Medical School. To be given April 2024
- NIH NCI IMAT symposium. December 2023
- CMB Research Symposium Keynote Speaker, Michigan State University. October 2023
- UT Southwestern. October 2023
- Johns Hopkins University. October 2023
- New Investigator in Chromatin and Epigenomics (NICE) conference. October 2023
- Yale University. September 2023
- Wesleyan University, September 2023
- University of Toronto. September 2023

Penn State Molecular Biology Symposium on Chromatin and Epigenetic Regulation of Transcription, August 2023  
EMBL Rome. May 2023  
University of Copenhagen. May 2023  
CATER seminar, University of Pittsburgh. April 2023  
The Steel City Chromatin Club. January 2023  
Asilomar Chromatin, Chromosomes, and Epigenetics Conference. December 2022  
PittGene, University of Pittsburgh. November 2022  
Cold Spring Harbor Laboratories Course on Chromatin, Epigenetics, and Transcription, Guest lecture. August 2022  
Bowling Green State University, February 2022.  
Pittsburgh Liver Research Center, University of Pittsburgh. February 2022.  
FunZoom Sunday Seminar Series for Undergraduate Students, Harvard Medical School. January 2022  
University of California, San Francisco. November 2021  
University of Pittsburgh, Senior Vice Chancellor Lecture. November 2021  
Cold Spring Harbor Laboratories Meeting Mechanisms of Eukaryotic Transcription, September 2021  
University of Oregon. May 2021  
Wesleyan University. March 2021  
Indiana University School of Medicine. February 2021  
Hillman Cancer Center, University of Pittsburgh. February 2021  
Fragile Nucleosome Virtual Seminar Series. October 2020  
Duquesne University. October 2020  
Indiana University, Bloomington. To be given September 2020 *\*cancelled due to COVID-19*  
Cold Spring Harbor Laboratories Course on Chromatin, Epigenetics, and Transcription, Guest lecture. To be given July 2020 *\*cancelled due to COVID-19*  
Keystone Symposia: Gene Regulation from Mechanism to Disease. January 2020  
Human Genetics Department, University of Pittsburgh. November 2019  
Michigan State University. October 2019  
Cold Spring Harbor Laboratories Meeting Mechanisms of Eukaryotic Transcription, August 2019  
Penn State Molecular Biology Symposium on Chromatin and Epigenetic Regulation of Transcription, July 2019  
Pittsburgh Local Nucleic Acids Meeting, Carnegie Mellon University. May 2019  
The Epigenome Across the Lifespan, University of Pittsburgh. May 2019  
University of the Sciences in Philadelphia. April 2019  
Computational and Systems Biology Department, University of Pittsburgh. January 2019  
Lynch Syndrome Focus Group, University of Pittsburgh. January 2019  
School of Engineering/Biological Sciences collaborative symposium, University of Pittsburgh. Dec 2018  
School of Medicine/Biological Sciences collaborative symposium, University of Pittsburgh. May 2018  
Pittsburgh Area Chromatin Symposium, University of Pittsburgh. May 2018  
Magee-Womens Research Institute, University of Pittsburgh. March 2018

### **CONFERENCE POSTER PRESENTATIONS**

EMBL: Chromatin and Epigenetics, Heidelberg, Germany. May 2023  
Keystone Symposia: Gene Regulation from Mechanism to Disease, Denver, CO, USA. January 2020  
Keystone Symposia: Gene Control in Development Disease, British Columbia, Canada. March 2018  
Cold Spring Harbor Laboratories Systems Biology Conference, New York, USA. March 2018

### **PROFESSIONAL SERVICE**

#### **Editorial Board(s), Guest Editorships, Advisory Boards**

Editorial Advisory Board, *Chromosome Research* 2018 – current  
Early Career Reviewer, *eLife* 2018 – 2019

#### **Grant Reviews:**

Wellcome Funding Research Grant, Oct 2023 (1)

NIH GHD Review Panel, Feb 2023 (panel)  
UKRI Biotechnology and Biological Sciences Research Council (BBSRC), Jan 2023 (1)  
European Research Council, May 2022 (1)  
UKRI Medical Research Council (MRC), Mar 2022 (1)  
NIH NCI Review Panel ZCA TCRB-J(J1), Nov 2020 (panel)  
UKRI Medical Research Council (MRC), Jun 2020 (1)

#### **Manuscript Reviews:**

Molecular Systems Biology, 2023 (1); Cancer Research Communications, 2023 (1); JOVE, 2023 (1); Review Commons, 2023 (1); Molecular Cell, 2023 (1); Cell Reports, 2023 (2); Genome Biology, 2023 (1); Nature Protocols, 2023 (1); Science, 2022 (1); Nucleic Acids Research, 2022 (3); Nature Protocols, 2022 (1); EMBO J, 2022 (1); Genome Research, 2022 (1); Nature Communications, 2022 (1); Genome Biology, 2022 (1); Communications Biology, 2022 (1); Chromosome Research, 2021 (1); Nature Protocols, 2021 (1); Nature Communications, 2021 (1); The EMBO J, 2021 (1); Nucleic Acids Research, 2021 (1); Review Commons, 2021 (1); Essays in Biochemistry, 2021 (1); Journal of Cell Biology, 2021 (1); Cell Reports, 2021 (1); eLife, 2021 (3); Nucleic Acids Research, 2020 (1); Genome Research, 2020 (1); Nature Reviews Methods Primer, 2020 (1); Chromosome Research, 2020 (1); PLoS Genetics, 2020 (1); Cell Reports, 2020 (1); Trends in Biochemical Sciences, 2020 (1); Genetics, 2020 (1); Nature Communications, 2020 (2); Nature Structure Molecular Biology, 2020 (1); BMC Genomics, 2020 (1); Nature, 2019 (1); Nucleic Acids Research, 2019 (2); WIREs System Biology and Medicine, 2019 (1); Nature Communications, 2019 (1); PLoS Biology, 2019 (1)

#### **UNDERGRADUATE-LEVEL TEACHING SINCE APPOINTMENT**

**Instructor:** Department of Biological Sciences Genomics (BIOSC1275), University of Pittsburgh, January 2023-April 2023. Enrollment: 62 students

**Instructor:** Department of Biological Sciences Genomics (BIOSC1275), University of Pittsburgh, January 2022-April 2022. Enrollment: 65 students

**Instructor:** Department of Biological Sciences Genomics (BIOSC1275), University of Pittsburgh, January 2021-April 2021. Enrollment: 65 students

**Instructor:** Department of Biological Sciences Genomics (BIOSC1275), University of Pittsburgh, January 2020-April 2020. Enrollment: 36 students

#### **GRADUATE-LEVEL TEACHING SINCE APPOINTMENT**

**Guest Lecturer:** Systems Biology Graduate Course, University of Pittsburgh, April 5, 2023 “Higher order chromatin structure”. 1 Lecture, 1.5 hours.

**Guest Lecturer:** Department of Biological Sciences Graduate Seminar Course, University of Pittsburgh, November 14, 2022. “Bias in academic science”. 1 Lecture, 1 hour.

**Guest Lecturer:** Department of Biological Sciences Graduate Seminar Course, University of Pittsburgh, November 8, 2021. “Data Bias in science”. 1 Lecture, 1 hour.

**Guest Lecturer:** Department of Biological Sciences Graduate Genomic Course, University of Pittsburgh, February 25, 2021. “Genome-wide epigenetic profiling methods”. 1 Lecture, 1 hour.

**Guest Lecturer:** Department of Biological Sciences Graduate Seminar Course, University of Pittsburgh, November 16, 2020. “Bias in academic science”. 1 Lecture, 1 hour.

**Guest Lecturer:** Department of Biological Sciences Graduate Genomic Course, University of Pittsburgh, October 1, 2018. “Genome-wide epigenetic profiling methods”. 1 Lecture, 2 hours.

#### **TEACHING PRIOR TO APPOINTMENT**

**Teaching Assistant,** Department of Biological Sciences, University of Pittsburgh.  
Introduction to Biology Laboratory II. Summer 2012. Duties: Lab setup and instruction

**Teaching Assistant,** Department of Biological Sciences, University of Pittsburgh.  
Introduction to Biology Laboratory I. Summer 2012. Duties: Lab setup and instruction

**Teaching Assistant**, Department of Biological Sciences, University of Pittsburgh.  
Virology Laboratory. Fall 2010. Duties: Lab setup and instruction

### **LAB PERSONNEL AND ACTIVITIES**

<b>Current Personnel</b>	<b>Position</b>	<b>Start Date</b>
Rinku Dhungana	Rotation Student	November 2023
Kya Foyx	Undergraduate Researcher	February 2023
Emily Brown	ISB PhD Student	January 2023
Aigbirhemwen Woghiren-Afegbua	MCDB PhD Student	May 2022
Rithika Sankar	ISB PhD Student	January 2022
Mika Wesley	Undergraduate Researcher	August 2021
Braulio Bonilla Villagran	Postdoctoral Researcher	January 2021
Sarah Tripplehorn	MCDB PhD Student (Joint with K. Arndt)	April 2019
Benjamin Patty	MCDB PhD Student	April 2019
Santana Lardo	Research Specialist III	June 2018
David Klein	MCDB PhD Student	February 2018

<b>Previous Personnel</b>	<b>Position</b>	<b>Dates</b>	<b>Subsequent positions (most recent listed last)</b>
Rinku Dhungana	Rotation Student	November 2023 – February 2023	Continuing rotations
Eman Soliman	Rotation Student	August 2023 – November 2023	Continuing rotations
Emily Brown	Research Specialist II	August 2020 – August 2022	PhD at the University of Pittsburgh
Jasmine Dioguardi	HUGEN Master's Student	March 2021 – July 2022	Research Specialist at Ideaya Biosciences
S. Hazel McGuffin	HMB Rotation Student	January 2022 – April 2022	PhD at Michigan State University
Trirupa Chakraborty	Rotation Student	August 2021 – October 2021	PhD in J. Das lab
Catarina Colmatti Bromatti	Rotation Student	August 2021 – November 2021	PhD in M. Rebiez lab
Cailin Jordan	Undergraduate Researcher	May 2019 – July 2020	PhD at University of Washington
Charles Agbavor	Rotation Student	October 2020 – February 2021	PhD in L. Cahoon Lab
Rody Kingston	Rotation Student	August 2020 – October 2020	Exited Program
Lisa Coe	Undergraduate Researcher	January 2018 – August 2020	Research Tech, NYU Abu Dhabi
Dominic Hendrickson	Undergraduate Researcher	February 2018 – August 2020	MA at Pitt Public Health
Christine (Kris) Troy	Research Specialist II	April 2018 – August 2020	PhD at UC MERCED



Kayla Komondor	Rotation Student	February 2020 – April 2020	PhD in A. Carlson Lab
Sanchirmaa Namjilsuren	Rotation Student	February 2020 – April 2020	PhD in K. Arndt Lab
Mitchell Lesko	Rotation Student	August 2019 – November 2019	PhD in J. Durrant/A. O'Donnell Labs
Alex Francette	Rotation Student	February 2019 – April 2019	PhD in K. Arndt Lab
Shunran Zhang	Rotation Student	November 2018 – February 2019	Exited Program
Caleb Kim	Undergraduate Researcher	February 2018 – July 2018	Undergraduate student

<b>Trainee Fellowships and Awards</b>	<b>Name/Position</b>	<b>Year(s)</b>
<b>Keystone Symposia Travel Award</b>	Emily Brown, Graduate Student	2024
<b>ABRCMS Poster Presentation Award</b>	Kya Foxx, Undergraduate Researcher	2022
<b>Penn State Chromatin Symposium Student Travel Award</b>	Rithika Sankar, Graduate Student	2023
<b>Penn State Chromatin Symposium Student Travel Award</b>	Benjamin Patty, Graduate Student	2023
<b>Penn State Chromatin Symposium Student Travel Award</b>	Sarah Tripplehorn, Graduate Student	2023
<b>CATER T32 Training Program</b>	Emily Brown, Graduate Student	2022 – 2024
<b>NIH UG Summer Research Supplement (to R35GM133732)</b>	Kya Foxx, Undergraduate Researcher	Summer, 2023
<b>NIH Diversity Supplement (to R35GM133732)</b>	Aigbirhemwen Woghiren-Afegbua, Graduate Student	2022 – 2024
<b>Chancellor's Undergraduate Research Fellowship</b>	Mika Wesley, Undergraduate Researcher	Fall, 2022
<b>Norman H. Horowitz Fellowship</b>	Mika Wesley, Undergraduate Researcher	Summer, 2022
<b>Cell Biology NIH T32 Training Program</b>	Sarah Tripplehorn, Graduate Student	2020 – 2021
<b>National Science Foundation (NSF) GRFP</b>	Ben Patty, Graduate Student	2020 – 2023

<b>Trainee Fellowships and Awards</b>	<b>Name/Position</b>	<b>Year(s)</b>
<b>Norman H. Horowitz Fellowship</b>	Cailin Jordan, Undergraduate	Summer, 2020
<b>HHMI Summer Research Fellowship. Department of Biological Sciences, University of Pittsburgh.</b>	Cailin Jordan, Undergraduate Researcher	Summer, 2019
<b>HHMI Summer Research Fellowship. Department of Biological Sciences, University of Pittsburgh.</b>	Lisa Coe, Undergraduate Researcher	Summer, 2018

**SERVICE:**

**Workshops, Panels, and Events (organized and given):**

**Women in Research**, University of Pittsburgh, November 2023

*Presented at this undergraduate organization*

**Attendance to ABRCMS**, Phoenix, Arizona, November 2023

*Organized, funded, and lead Departmental attendance*

**New Investigators in Chromatin and Epigenetics Conference**, Denver, Colorado, October 2023

*Organized, funded (by Epicypther), and initiated conference*

**Departmental Community Norms Discussion**, Department of Biological Sciences Retreat, Pittsburgh, Oct 2023

*Led Departmental-wide discussion on Community Norms*

**Women in Research**, University of Pittsburgh, February 2023

*Presented at this undergraduate organization*

**Attendance to ABRCMS**, Anaheim, California, November 2022

*Organized, funded, and lead Departmental attendance*

**PhD, MD, MD/PhD panel for undergraduates**, Department of Biological Sciences, University of Pittsburgh, March 2023

*Organized event*

**How to get in a research lab as an undergraduate**, Department of Biological Sciences, University of Pittsburgh, December 2022

*Organized event*

**Attendance to ABRCMS**, virtual, November 2021

*Organized and lead Departmental attendance*

**Inclusion in Academic Science**, *eLife* Wednesday ECR series, February 2021 (<https://elifesciences.org/inside-elife/1aee75f1/webinar-report-promoting-inclusion-in-science>)

*Speaker*

**Women in Science Day Panel**, Department of Biological Sciences, University of Pittsburgh, February 2021

*Organized event*

**How to interview for graduate school**, Department of Biological Sciences, University of Pittsburgh, January 2021

*Organized event with Jessica Wandelt*

**Attendance to ABRCMS**, virtual, November 2020

*Organized and lead Departmental attendance*

**Bias and Inclusion in Academic Science**, RNA Rustbelt Meeting Diversity Panel, October 2020

*Speaker*

**Inclusion in Academic Science**, Donders Research Institute Radboud University, Netherlands, September 2020

*Speaker*

**Departmental Book Club: Superior**, Department of Biological Sciences, University of Pittsburgh August 2020

*Developed and co-led event (with Jahree Sosa)*

**Inclusion in Academic Science**, University of Pittsburgh Diversity Forum, July 2020

*Speaker*

**Women in Science Day Celebration**, Department of Biological Sciences, University of Pittsburgh, February 2020  
Created and *organized event*

**University committees:**

Committee	Role	Academic Year(s)
Integrative Systems Biology Graduate Recruiting Committee	Member	2020 – 2021
Integrative Systems Biology Graduate Recruiting Committee	Member	2019 – 2020

**Departmental committees:**

Committee	Role	Academic Year(s)
Dept Grant Preparation Committee	Member	2023 – 2024
Advisory Committee	Member	2023 – 2024
Dept Grant Preparation Committee	Member	2022 – 2023
Website Committee	Member	2022 – 2023
Faculty Search Committee (Comp Bio)	Member	2021 – 2022
Committee on Diversity, Inclusion, and Equity	Member	2021 – 2022
Committee on Diversity, Inclusion, and Equity	Member	2020 – 2021
Graduate Fellowship Committee	Member	2020 – 2021
Committee Diversity Initiatives	Member	2019 – 2020
Graduate Fellowship Committee	Member	2019 – 2020
HHMI Oversight Committee	Member	2018 – 2019

**Dissertation committees (University of Pittsburgh):**

Student	Role	Purpose	P.I.	Program	Dates
Dwon Jordana	Member	Thesis committee	Clark	MCDB	Fall 2023 – Present
Varbi Mridha	Member	Comps/Thesis	Al Diri	HUGEN	Fall 2023 – Present
Jing Zhang	Member	Comps/Thesis	Mann	MGDB	Spring 2023 – Present
Trirupa Chakraborty	Member	Comps/Thesis	Das	ISB	Spring 2023 – Present
Rashmee Silwal	Member	Comps	Lord	ISB	Spring 2022
Etan Dieppa	Chair	HMB Committee	n/a	HMB	Fall 2020 – Spring 2021
Leah Cabo	Member	Comps/Thesis	Boyle	MCDB	Fall 2020 – Present
Karen Peralta Martinez	Chair	Comps/Thesis	Kohl	MCDB	Fall 2020 – Present
Shenyu Shu	Member	Comps/Thesis	Gao	ISB	Spring 2020 – Present
Yunye Zhu	Chair	PhD Thesis	Kaplan	MCDB	Spring 2019 – Fall 2021
Alex Francette	Member	Comps/Thesis	Arndt	MCDB	Fall 2019 – Present
Payal Arora	Member	Comps/Thesis	Kaplan	MCDB	Fall 2019 – Present
Madeline Torres	Member	HMB committee	n/a	HMB	Fall 2019 – Spring 2020

**External Dissertation committees:**

Student	Role	Purpose	P.I.	Program	Date
Joseph Heath	External Member	PhD Thesis	Jill Dembowski	Duquesne University, Biological Sciences	Fall 2021 – Present
Jasmina Al-Mousawi	External Examiner	Masters Thesis	Josh Brickman	Univ of Copenhagen	Fall 2020

**BPhil Thesis committee:**

Student	Role	Purpose	P.I.	Program	Date
Anishka Parikh	Member	BPhil Thesis	Jonathan Alder	Biological Sciences	Fall 2023 – Present

**Diversity Initiatives:**

PI of Fisher Fund Grant “Promoting PEERs: tiered mentoring to foster career development across marginalized student populations” 08/01/23 – 07/30/25

PI of Pitt SEED Grant “Creating an inclusive environment through tiered mentoring to promote diverse STEM communities” 08/01/21 – 07/30/23

PI of Burroughs Wellcome Fund Career Guidance for Trainees award “Promoting PEERs: tiered mentoring to foster career development across marginalized student populations” 08/01/21 – 07/30/22

Article on effectively navigating mentee/mentor relationship: <http://doi.org/10.1111/febs.15823>

Article on writing supportive and effective reference letters: <http://doi.org/10.1111/febs.15757>

Blog discussing women in science: <https://ecrlife.org/invisible-woman/>

Article on Fair Funding: <https://doi.org/10.38126/JSPG180105>

Slides and script for inclusion in academic science:

[https://figshare.com/articles/presentation/Intersectionality\\_In\\_Science\\_pptx/12616712/2](https://figshare.com/articles/presentation/Intersectionality_In_Science_pptx/12616712/2)

Template for lab document: <https://osf.io/2xn6z/>

Guidelines for inclusive practices: <https://osf.io/muk7v/>

Blog for inclusion in science: <https://ecrlife.org/intersectionality-what-it-means-2/>

Intersectionality Initiative Lead, Early Career Group eLife Community Ambassador April 2019 – June 2020

**Training certificates/programs:**

Advising Certification and Training Program, University of Pittsburgh, completed July 2023

Sustainability Professional Program, University of Pittsburgh, completed April 2023

Certificate in Organizational Leadership and Ethics, University of Pittsburgh, completed October 2022

Survivor Support Network, University of Pittsburgh, completed September 2022

Racial Equity Consciousness, University of Pittsburgh, completed April 2022

Allies Network, University of Pittsburgh, completed August 2021

Mental Health Champion, University of Pittsburgh, completed December 2021

Global Competence Program, University of Pittsburgh, completed October 2021

Diversity and Inclusion Program, University of Pittsburgh, completed September 2019

**Professional Development (attended):**

Strategies for Effective Teaching and Mentoring of Students, University of Pittsburgh, January 2024

Active Learning with Top Hat Classroom, University of Pittsburgh, January 2024

Teach In: Trans Identities for University Educators, University of Pittsburgh, May 2023

Queering in STEM, University of Pittsburgh, May 2023

Pitt Blue and Gold is Green, University of Pittsburgh, April 2023

Anti-Racist Pedagogy, University of Pittsburgh, February 2023

Supporting Graduate Student Mental Health, University of Pittsburgh, December 2022

Sustainable Food Systems, University of Pittsburgh, December 2022

Sustainability: Circular, Regenerative, and Just Economies, University of Pittsburgh, November 2022

Promoting Culturally Responsive Care on Campus, University of Pittsburgh, November 2022

Leadership and Effective Talent Development, University of Pittsburgh, October 2022

My Voice Has Power: A Bystander Intervention Discussion, University of Pittsburgh, September 2022

Supporting Survivors of Sexual Misconduct, University of Pittsburgh, September 2022

Sustainability: Building an Equitable Future, University of Pittsburgh, May 2022

Classroom as Catalyst for Racial Justice Centered Activism, University of Pittsburgh, May 2022

dB-SERC Faculty Retreat on DEI in Teaching, Learning and Assessment, University of Pittsburgh, May 2022

Sustainability: Environment, Ecosystems, and You, University of Pittsburgh, April 2022  
Sustainability Foundations: Balancing the Three Es, April 2022  
Championing Racial Justice, Racial Equity Consciousness Institute, University of Pittsburgh, April 2022  
Acknowledging Racial Trauma, Racial Equity Consciousness Institute, University of Pittsburgh, March 2022  
Building Racial Empathy, Racial Equity Consciousness Institute, University of Pittsburgh, March 2022  
Embracing Racial Diversity, Racial Equity Consciousness Institute, University of Pittsburgh, March 2022  
Addressing Racial Bias, Racial Equity Consciousness Institute, University of Pittsburgh, March 2022  
Understanding Racial Oppression, Racial Equity Consciousness Institute, University of Pittsburgh, Feb 2022  
Racial Equity Consciousness: Overview, Racial Equity Consciousness Institute, University of Pittsburgh, Feb 2022  
Recognizing Distressed Students, University of Pittsburgh, March 2022  
Mental Health Champion Certificate Program, University of Pittsburgh, Fall 2021  
Racial Equity Consciousness, University of Pittsburgh, Fall 2021  
Allies Network Training, University of Pittsburgh, August 2021  
LGBTQIA+ Inclusion in Course Content and Interactions, University of Pittsburgh, June 2021  
Ethical Use of Power, University of Pittsburgh, June 2021  
Solving Problems and Ethical Dilemmas, University of Pittsburgh, May 2021  
Silence (Not Golden): Dissent and Consensus in the Workplace, University of Pittsburgh, May 2021  
Principles and Practices of Servant Leadership, University of Pittsburgh, April 2021  
Understanding Russia, University of Pittsburgh, April 2021  
Understanding Korea, University of Pittsburgh, October 2020  
Developmental Model of Intercultural Sensitivity and the IDI Assessment Tool, University of Pittsburgh, June 2020  
Understanding India, University of Pittsburgh, May 2020  
Veterans on Campus: Understanding Resources and Opportunity, University of Pittsburgh, May 2020  
Supporting Trans and Non-Binary Community Members, University of Pittsburgh, April 2020  
Religion Diversity: Challenging Assumptions to Advance Inclusion, University of Pittsburgh, December 2019  
Microaggression: Recognizing and Challenging a Subtle Form of Bias, University of Pittsburgh, May 2019  
Different Like You: Recognizing Stereotypes and Removing Barriers, University of Pittsburgh, December 2018  
Workplace Bullying: Understanding a Barrier to Equal Opportunity, University of Pittsburgh, November 2018  
Preventing Sexual Misconduct, University of Pittsburgh, November 2018  
Gender Theory, Gender Diversity, and Trans-Inclusive Spaces, University of Pittsburgh, November 2018  
Intercultural Competency: Beyond the Basics, University of Pittsburgh, November 2018  
Baby Boomers to Millennials: Respect and Productivity in the Workplace, University of Pittsburgh, October 2018  
Fostering a Diverse and Inclusive Environment: The Why and How, University of Pittsburgh, October 2018