CHAD BRANDON STEIN
chadbstein@gmail.com
(267) 760-0351

EDUCATION

PhD candidate **Harvard University**, PhD Program in Biological and Biomedical Sciences, 2023
Thesis Advisor: Karen Adelman, PhD

BPhil **University of Pittsburgh**, Molecular Biology, 2015
Summa Cum Laude, Phi Beta Kappa

RESEARCH

Graduate Student Researcher, Harvard Medical School, *2018-2023*
Department of Biological Chemistry and Molecular Pharmacology
Advisor: Karen Adelman, PhD
Investigating the Role of the Integrator Complex in Regulating Transcription
- Project aims: Characterize the breadth and function of the Integrator complex in terminating promoter-proximally paused RNA Polymerase II

Postbaccalaureate IRTA Fellow, National Institutes of Health, NIDDK *2015–2017*
Advisor: Astrid Haase, MD, PhD
Dissecting the 5' Nucleotide Bias of Primary piRNAs
- Project aims: Characterize the genetic and biochemical sources of preferential loading of 1U piRNAs into Piwi, including any functional consequences of altering/abolishing it

DAAD RISE Intern, Justus-Liebig-Universität Gießen, Institut für Biochemie *Summer 2014*
Advisors: Fabian Bietz and Wolfgang Wende, PhD
Designing Novel Engineered Nucleases for Targeted Genome Editing
- Project aims: Use design principles of an existing genome engineering technology, TALENs, to create more efficient means of site-specific targeting with novel nuclease domains

Undergraduate Researcher, University of Pittsburgh, Department of Biological Sciences *2012-2015*
Advisor: Paula Grabowski, PhD
The Effects of Genotoxic Stress on Alternative Splicing in Cancer
- Project aims: Elucidate the mechanism(s) by which genotoxic stress induces changes in alternative RNA splicing patterns, with an emphasis on oncogenes and tumor suppressor genes

PEER-REVIEWED PUBLICATIONS

Stein CB, Field AR, Mimoso CA, Zhao C, Huang KL, Wagner E.J., and Adelman K, 2022. Integrator endonuclease drives promoter-proximal termination at all RNA polymerase II-transcribed loci. *Molecular Cell*, 82(22), pp.4232-4245.

Zhou H, **Stein CB**, Shafiq TA, Shipkovenska G, Kalocsay M, Paulo JA, Zhang J, Luo Z, Gygi SP, Adelman K and, Moazed D, 2022. Rixosomal RNA degradation contributes to silencing of Polycomb target genes. *Nature*, 604(7904), pp.167-174.

Huang KL, Jee D, **Stein CB**, Elrod ND, Henriques T, Mascibroda LG, Baillat D, Russell WK, Adelman K, and Wagner EJ, 2020. Integrator recruits protein phosphatase 2A to prevent pause release and facilitate transcription termination. *Molecular Cell*, 80(2), pp.345-358.

Stein CB, Genzor P, Mitra S, Elchert A, Ipsaro J, Benner L, Sobti S, Su Y, Hammell M, Joshua-Tor L, and Haase A, 2019. Decoding the 5′ nucleotide bias of PIWI-interacting RNAs. *Nature Communications*, *10*(1), p.828.

ORAL PRESENTATIONS

Integrator endonuclease drives promoter proximal termination at all RNA polymerase II transcribed loci; EMBL Transcription and chromatin; Short talk; August 2022; Heidelberg, Germany

Exploring how the Integrator complex attenuates transcription in mammalian cells; NSF-funded MIT Genome Architecture and Function Workshop; Talk; June 2020; Virtual

POSTER PRESENTATIONS

Stein CB, Henriques T, Elrod E, Tatomer D, Wilusz J, Wagner E, Adelman K. The Integrator Complex Attenuates Protein-coding Gene Expression. RNA Control & Regulation, Cold Spring Harbor Laboratory; May 2019; Cold Spring Harbor, NY.

Stein CB, Ipsaro JJ, Joshua-Tor L, Haase AD. Dissecting the 5' Nucleotide Bias of piRNAs. Regulatory & Non-Coding RNAs, Cold Spring Harbor Laboratory; August 2016; Cold Spring Harbor, NY.

GRANT SUPPORT

January 2021 - December 2022
Ruth L. Kirschstein Predoctoral Individual National Research Service Award (F31)
National Institute of Allergy and Infectious Diseases, NIH
Principal Investigator, 1F31AI160672-01A1
Investigating the Integrator Complex's Role in Regulating Inflammatory Transcription

HONORS, AWARDS, AND FELLOWSHIPS

Certificate of Distinction in Teaching, Harvard University *2020*
Honorable Mention, National Science Foundation Graduate Research Fellowship Program *2019*
Outstanding Poster Award, NIH Postbac Poster Day *2016/2017*
Brackenridge Research Fellowship, University of Pittsburgh *2014*
DAAD RISE Internship in Giessen, Germany *2014*
(Internationally competitive award given for a summer of research at a university laboratory in Germany.)
G. Alec Stewart Student Achievement Award, University of Pittsburgh *2014*
(One of the Honors College's most prestigious awards; given to four students annually for outstanding academic achievement, intellectual curiosity, and sense of citizenship.)
Chancellor's Undergraduate Research Fellowship, University of Pittsburgh *2013*
Brackenridge Summer Research Fellowship, University Honors College *2013*
Dean's List, University of Pittsburgh *2011-2015*
University Honors College Full-Tuition Scholarship, University of Pittsburgh *2011-2015*

TEACHING, OUTREACH, AND SERVICE

Teaching Fellow, Cellular Biology and Molecular Medicine, Harvard University	*Fall 2020*
Teaching Fellow, Life Sciences Outreach Program, Harvard University	*Spring 2019*
Teaching Assistant, Principles of Genetics, Harvard Medical School	*Fall 2018*
Undergraduate Teaching Assistant, Honors Organic Chemistry I, University of Pittsburgh	*Fall 2013*

Teaching Certificate, Harvard University	*Spring 2023*
Undergraduate Mentoring Workshop Series, Harvard University	*Spring 2021*
Podcast Producer, Science in the News, Harvard University	*Fall 2020-2021*
Trainee Committee, Department of Biological Chemistry and Molecular Pharmacology	*2019-2023*
Mentor, Three rotation students (Harvard) and one summer student (NIH)	*2016, 2020-2021*