

**Dr. Amy R. Eisenberg**  
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## EDUCATION

**University of California, Berkeley**, Berkeley, CA 8/2014 – 8/2020  
Ph.D. in Molecular and Cell Biology, GPA: 3.9  
Advisor: Gloria Brar  
Dissertation Title: *Defining non-canonical modes of gene regulation in budding yeast meiosis*

**Brandeis University**, Waltham, MA 8/2008 – 5/2012  
B.S. in Biology with Highest Honors, Summa Cum Laude, Minors in Chemistry and Classical Studies, GPA: 3.9

## RESEARCH EXPERIENCE

**Dr. Gloria Brar Lab**, *Graduate Student Researcher* 9/2014 – 8/2020  
Molecular and Cell Biology Department, UC Berkeley, Berkeley, CA

- Performed research investigating changes in translation initiation sites during budding yeast meiosis, focusing on genes with extended isoforms from non-AUG start codons
- Investigated protein degradation globally in meiosis, with an emphasis on ribosome degradation

**Dr. Alex Kentsis Lab**, *Research Technician* 7/2013 – 8/2014  
Molecular Pharmacology & Chemistry Program, Sloan-Kettering Institute, New York, NY

- Conducted research on transposable elements, DNA transposases and leukemia
- Managed lab set-up, organization, ordering, services and equipment

**Dr. A. Thomas Look Lab**, *Research Technician* 6/2012 – 6/2013  
Pediatric Oncology Department, Dana-Farber Cancer Institute, Boston, MA

- Pursued research on AML and Rhabdoid tumors under the direction of Alex Kentsis (see above)
- Screened and raised transgenic zebrafish to monitor tumor development and progression

**Dr. Douglas Theobald Lab**, *Undergraduate Research Assistant* 6/2011 – 5/2012  
Biochemistry Department, Brandeis University, Waltham, MA

- Carried out research on bacteriorhodopsin, a light-activated membrane transport protein
- Completed a senior honors thesis, "Activity and stability of proton pumping mutants at D93 in bacteriorhodopsin from *H. Turkmenica*"

## PUBLICATIONS

**Eisenberg, A.R.**, Higdon, A., Hollerer, I., Fields, A.P., Jungreis, I., Diamond, P., Kellis, M., Jovanovic, M., Brar, G.A. (2020). Translation initiation site profiling reveals widespread synthesis of non-AUG-initiated protein isoforms in yeast. *Cell Systems*. doi: 10.1016/j.cels.2020.06.011.

**Eisenberg, A.R.\***, Higdon, A.\*, Keskin, A., Hodapp, S., Jovanovic, M., Brar, G.A. (2018). Precise post-translational tuning occurs for most protein complex components during meiosis. *Cell Reports*. (\*denotes co-authorship) doi: 10.1016/j.celrep.2018.12.008.

Henssen, A.G., Koche, R., Zhuang, J., Jiang, E., Reed, C., **Eisenberg, A.**, ... Kentsis, A. (2017). PGBD5 promotes site-specific oncogenic mutations in human tumors. *Nature Genetics*. doi: 10.1038/ng.3866.

Henssen, A.G., Henaff, E., Jiang, E., **Eisenberg, A.R.**, ... Kentsis, A. (2015). Genomic DNA transposition induced by human PGBD5. *eLife*. doi: 10.7554/eLife.10565.

Mansour, M.R., Reed, C., **Eisenberg, A.R.**, ... Kentsis, A., Look, A. T. (2014). Targeting oncogenic interleukin-7 receptor signalling with N-acetylcysteine in T cell acute lymphoblastic leukaemia. *British Journal of Haematology*. doi: 10.1111/bjh.13115.

## ORAL PRESENTATIONS

“Defining non-canonical modes of gene regulation in budding yeast meiosis”

- Molecular and Cell Biology Thesis Research Presentations, May 20, 2020, UC Berkeley, Berkeley, CA.
- Berkeley Yeast Supergroup Monthly Meeting, February 7, 2020, UC Berkeley, Berkeley, CA.
- Cell and Developmental Biology Divisional Retreat, September 9, 2016, Asilomar Conference Center, Pacific Grove, CA.
- Center for RNA Systems Biology 4<sup>th</sup> Annual Meeting, October 18, 2016, UC Berkeley, Berkeley, CA.

## POSTER PRESENTATIONS

**Eisenber, A.R.**, Higdon, A., Hollerer, I., Fields, A.P., Jungreis, I., Diamond, P., Kellis, M., Jovanovic, M., Brar, G.A. Global identification of translation initiation sites reveals widespread translation of non-AUG-encoded protein isoforms in yeast meiosis.

- Cell and Developmental Biology Divisional Retreat, September 14, 2019, Asilomar Conference Center, Pacific Grove, CA. \*poster prize
- Genetics, Genomics and Development Divisional Retreat, October 20, 2018, Asilomar Conference Center, Pacific Grove, CA.
- Translational Control Conference, September 5, 2018, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.
- Genetics, Genomics and Development Divisional Retreat, October 28, 2017, Asilomar Conference Center, Pacific Grove, CA.
- Meiosis EMBO Conference, August 28, 2017, Hvar, Croatia.
- Molecular Cell Foundations Training Grant Symposium Poster Session, May 15, 2017, UC Berkeley, Berkeley, CA. \*poster prize
- American Society for Cell Biology Annual Meeting, December 5, 2016, San Francisco, CA.

**Eisenberg, A.R.**, Brar, G.A. Translation elongation factor regulation in budding yeast meiosis.

- Genetics, Genomics and Development Divisional Retreat, October 24, 2015, Asilomar Conference Center, Pacific Grove, CA.
- Cell and Developmental Divisional Retreat, September 19, 2015, Granlibakken Conference Center, Lake Tahoe, CA. \*poster prize
- Protein Synthesis and Translational Control, EMBO Conference, September 10, 2015, EMBL, Heidelberg, Germany.
- Center for RNA Systems Biology 3<sup>rd</sup> Annual Meeting, September 4, 2015, UC Berkeley, Berkeley, CA.

**Eisenberg, A.R.**, Mackin, K.A., Theobald, D.L. Proton and Chloride Pumping Mutants of Bacteriorhodopsin, Expressed in *E. coli*.

- Biochemistry Departmental Retreat, October 28, 2011, Woods Hole, MA.
- Division of Science Poster Session, August 4, 2011, Brandeis University, Waltham, MA.

## HONORS AND AWARDS

- *Departmental Retreat Poster Prize*, UC Berkeley 9/2019
- *MCB Graduate Student Travel Grant*, UC Berkeley 7/2017
- *Molecular Cell Foundations Symposium Poster Prize*, UC Berkeley 5/2017
- *Departmental Retreat Poster Prize*, UC Berkeley 9/2015
- *MCB Graduate Student Travel Grant*, UC Berkeley 8/2015
- *Phi Beta Kappa*, Brandeis University 5/2012
- *Dean's List*, Brandeis University 12/2008 – 5/2012
- *Life Science Scholars Program*, Brandeis University 8/2008 – 5/2012
- *Premier Trustee Scholarship*, Brandeis University 8/2008 – 5/2012

## TEACHING, VOLUNTEER AND MENTORSHIP EXPERIENCE

**Department of Molecular and Cell Biology**, University of California, Berkeley, CA

*Undergraduate Student Mentor* 1/2018-12/2018

- Trained Sasha Saias, an undergraduate student, in laboratory research techniques
- Provided guidance on an independent research project

*Admissions Committee Graduate Student Representative* 12/2017-2/2018

- Read and reviewed applications for graduate admission
- Provided input and feedback on applicants during admissions committee meetings

*Graduate Student Instructor for Genetics Laboratory Course* 1/2017 – 5/2017

- Explained and demonstrated techniques for laboratory class experiments
- Wrote and graded quizzes and problem sets, proctored and graded exams

*Undergraduate Student Mentor* 9/2015-5/2017

- Trained Sarah Guo, an undergraduate student, in laboratory research techniques
- Provided guidance on an independent research project leading to a senior honors thesis

*Graduate Student Instructor for Genetics Lecture Course* 8/2015 – 12/2015

- Lead weekly discussion sections and held office hours to support lecture materials
- Wrote and graded quizzes and problem sets, proctored and graded exams

**Bay Area Scientists in Schools (BASIS)**, Berkeley, Oakland and Richmond, CA 12/2014 – 5/2020

- Volunteered monthly, teaching in kindergarten classrooms about germs and the scientific method
- Attended organizational meetings and events to promote volunteering in science

**Expanding Your Horizons**, Berkeley, CA 3/2015 – 3/2017

- Helped run an all-day event for middle-school girls to learn about STEM topics
- Provided directions and assisted attendees during the event

**Biology Department**, Brandeis University, Waltham, MA

*Peer Mentor for Biology Undergraduate Peer Mentorship Program* 8/2009 – 5/2012

- Advised incoming biology majors on course selection
- Provided support in coursework, scientific research and career options

*Teaching Assistant for Evolution Course with Professor James Morris* 8/2011 – 12/2011

- Led review and movie sessions to enhance and reinforce course material
- Graded problem sets and exams

## SKILLS

- **Laboratory:** DNA cloning and sequencing, enzymology, FACS, FPLC, gel electrophoresis, immunohistochemistry, lentiviral production and infection, mammalian cell and tissue culture, mass spectrometry, microscopy, PCR, protein expression and purification, ribosome profiling, RNA extraction and qPCR, sequencing library preparation, western blotting, yeast manipulation
- **Computer:** Adobe Illustrator, GraphPad Prism, MATLAB, Python