TARA ALPERT

PERSONAL INFORMATION

Address: 333 Cedar St. SHM C-111
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EDUCATION

2014 – present M. Phil. – *completed*
Ph.D. – *in progress*
Department of Molecular Biophysics and Biochemistry
Yale University (New Haven, CT)

Class of 2013 B.A. in Biochemistry
Washington University in St. Louis (St. Louis, MO)

RESEARCH EXPERIENCE

2014 – present **Ph.D. Candidate** at Yale University. Thesis title: Cross-regulation between transcription in splicing in yeast. Supervisor: Karla M. Neugebauer, Ph.D.

2011 – 2013 **Undergraduate researcher** at Washington University in St. Louis. Thesis title: Biochemical studies of phosphoethanolamine methyltransferase and serine decarboxylase from nematodes, plasmodium, and plants. Supervisor: Joseph M. Jez, Ph.D.

2010 – 2011 **Undergraduate researcher** at Washington University in St. Louis. Effect of gene expression patterns on behavioral plasticity in the European honey bee *Apis mellifera*. Supervisor: Yehuda Ben-Shahar, Ph.D.

2010 **Intern** at the Human BioMolecular Research Institute (San Diego, CA). Summer project on the cellular response to neurotoxin exposure.

2008 **Intern** at the Scripps Research Institute (San Diego, CA). Summer project aimed at drug discovery for Type II Diabetes. Implemented high-throughput screening of small molecules for insulin production in pancreatic cells.

PUBLICATIONS

2019 **Alpert T**, Reimer KA, Straube K, Neugebauer KM (2019) Long read sequencing of nascent RNA from budding and fission yeasts. *Methods in Molecular Biology* (accepted)

2017 Herzel L, Ottoz DSM, **Alpert T**, Neugebauer KM (2017) Splicing and transcription touch base: co-transcriptional spliceosome assembly and function. *Nature Rev Mol Cell Biol* 18, 637-650.

2016 **Alpert T**, Herzel L, Neugebauer KM (2016) Perfect timing: splicing and transcription rates in living cells. *Wiley Interdiscip Rev RNA*.

2012 Lee SG, **Alpert TD**, Jez JM (2012) Crystal structure of phosphoethanolamine methyltransferase from *Plasmodium falciparum* in complex with amodiaquine. *Bioorg Med Chem Lett* 22, 4990-4993.

Lee SG, Kim YC, **Alpert TD**, Nagata A, Jez JM (2012) Structure and reaction mechanism of phosphoethanolamine methyltransferase from the malaria parasite *Plasmodium falciparum* – an antiparasitic drug target. *J Biol Chem* 287, 1426-1434.

PRESENTATIONS

2019 Invited talk at University of Massachusetts Medical School (Worcester, MA)

Talk at Cold Spring Harbor Laboratory Eukaryotic mRNA Processing Meeting (Huntington, NY)

Poster at the Yale University Center for RNA Science and Medicine retreat (New Haven, CT)

Poster at Molecular Biophysics and Biochemistry department retreat (Woods Hole, MA)

Recorded presentation and poster at Oxford Nanopore Community Meeting (San Francisco, CA)

2018 Talk at Yale University C-Wing Seminar (New Haven, CT)

Talk at the Yale Center for RNA Science and Medicine's RNA club (New Haven, CT)

Talk at Molecular Biophysics and Biochemistry department retreat (Woods Hole, MA)

2017 Talk and poster at Oxford Nanopore Community Meeting (New York, NY)

Poster at Molecular Biophysics and Biochemistry department retreat (Hancock, MA)

Poster at EMBO conference "Regulation of RNA 3' end formation" (Oxford, United Kingdom)

Talk at Cellular and Molecular Biology Research in Progress Seminar Series (New Haven, CT)

	Talk at Yale University C-Wing Seminar (New Haven, CT)
	Attendance at AAAS Annual Meeting "Serving Society through Science Policy" (Boston, MA)
2016	Talk at Yale University C-Wing Seminar (New Haven, CT)
	Poster at Yale RNA Center Retreat (New Haven, CT)
	Poster EMBO conference "Gene Transcription in Yeast: From Chromatin to RNA and back" (Sant Feliu de Guíxols, Spain)
2013	Poster at ASPB Plant Biology Conference (Providence, RI)
2012	Poster at ASBMB Annual Meeting (San Diego, CA)

HONORS, AWARDS, AND FELLOWSHIPS

2017	Sponsored by PEO chapter AL in Wilton, CT for PSA award
2015-2016	Cellular and Molecular Biology Training Grant (NIGMS T32GM007223)
2013, 2014, 2015, 2016	National Science Foundation GFRP Honorable Mention
2012	American Society of Plant Biology Summer Undergraduate Research Fellowship
2011	American Society for Biochemistry and Molecular Biology Travel Award
2011	Howard Hughes Medical Institute Summer Undergraduate Research Fellowship

TEACHING AND CAREER ENRICHMENT

2019	Mentored MB&B rotation student through a 7-week rotation that produced a whole-genome nascent RNA sequencing dataset and data analysis
2017 - present	Discussion coordinator for Bystander Intervention Training workshops in the MB&B Department at Yale University
2018	Bioinformatics and Oxford Nanopore training with Smith and Mercer Labs at the Garvan Institute of Medical Research (Sydney, Australia)
	Mentor for undergraduate researcher using neural networks to model Oxford Nanopore datasets for optimization of analysis pipeline
2017	Hands-on Oxford Nanopore Sequencing workshop

	ASBMB Art of Science Communication Class
2016	Teaching fellow and discussion leader for MB&B 449a/749a Medical Impact of Basic Science
	Teaching fellow and discussion leader for MB&B/MCDB 105a An Issues Approach to Biology
	Seminar on communicating science to the public by New York Times Science Writer Carl Zimmer
2015	Practical Statistics for Experimentalists Workshop

SOFTWARE SKILLS

Proficient in R and python

Expertise in data analysis for next-generation and third-generation sequencing

Knowledgeable of biologically relevant tools and packages for data mining, sequence alignment, and genome analysis