

Søren Hough
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EDUCATION

University of Cambridge 2023 (Expected)	PhD Student <i>Department of Biochemistry</i>	Professor Steve Jackson <i>Laboratory</i>
UMass Amherst 2014	Microbiology <i>Bachelor of Science</i>	Departmental Honors with Distinction <i>Commonwealth Honors College</i>
	Film Studies <i>Certificate</i>	

WORK EXPERIENCE

Editor/Copy Editor — <i>Science for the People Magazine</i> Serving as a part of the editorial collective for a magazine focused on equitable and just use of science	Cambridge, UK Jan 2019 - Present
PhD Student/Research Assistant — <i>Lab of Steve Jackson, PhD, at Gurdon Institute/U of Cambridge</i> Using CRISPR to study ubiquitination and SUMOylation in the DNA damage response	Cambridge, UK Feb 2018 - Present
Head Science Writer — <i>Desktop Genetics</i> Wrote in-depth articles covering bioinformatics and CRISPR technology in the lab and clinic	London, UK June 2016 - Feb 2018
Research Associate — <i>Lab of Wen Xue, PhD, at RNA Therapeutics Institute at UMass Medical School</i> Used immunohistochemistry, cell culture and other bench skills to develop CRISPR therapeutics	Worcester, MA Dec 2015 - June 2016
Research Laboratory Technician I — <i>Lab of Wen Xue, PhD, at UMass Medical School</i> Used CRISPR systems to interrogate the function of key genes in cancer and other disease pathways	Worcester, MA Dec 2014 - Nov. 2015
Honors Researcher — <i>Lab of Jennifer Ross, PhD, at the University of Massachusetts</i> Used super-resolution microscopy to study and complete honors thesis on molecular motors	Amherst, MA Fall 2011 - Spring 2014
Student Researcher — <i>Lab of Peg Riley, PhD, at the University of Massachusetts</i> Examined the application of bacteriocin for burns; developed fundamental microbiology skills	Amherst, MA Spring 2011
First-Year Researcher — <i>Lab of Jesse Mager, PhD, at the University of Massachusetts</i> 1 of 23 students in First-Year Research Experience; studied developmental epigenetics, methylation	Amherst, MA Fall 2010
Research Intern — <i>Lab of Gustavo Turecki, MD, PhD, at McGill University</i> Studied epigenetic causes of differential gene expression in clinical suicide brain samples	Montréal, Québec, CA Summer 2010
Research Apprentice — <i>Lab of Henry Furneaux, PhD, at UConn School of Medicine</i> Researched and found putative link between viral microRNA and breast cancer	Farmington, CT Summers 2008, 2009

ACADEMIC PUBLICATIONS

- Hough SH, Ajetunmobi A. "A CRISPR Moratorium Isn't Enough: We Need A Boycott." *The CRISPR Journal*. Dec 2019. PMID: 31860353 [Article]
- Mou H, Ozata DM, Smith JL et al. "CRISPR-SONIC: targeted somatic oncogene knock-in enables rapid in vivo cancer modeling." *BMC Genome Medicine*. Apr 2019. PMID: 30987660 [Article]
- Hough SH, Ajetunmobi A. "The Future of CRISPR Applications in the Lab, the Clinic and Society." in *Precision Medicine, CRISPR, and Genome Engineering*. Springer. Nov 2017. PMID: 29130159 [Book Chapter]
- Mou H et al. "Genetic disruption of oncogenic Kras sensitizes lung cancer cells to Fas receptor-mediated apoptosis." *PNAS*. March 2017. PMID: 28320962 [Article]
- Hough SH, Kancleris K et al. "Guide Picker is a comprehensive design tool for visualizing and selecting guides for CRISPR experiments." *BMC Bioinformatics*. Mar 2017. PMID: 28288556 [Article]
- Song CQ, Li Y et al. "Genome-wide CRISPR Screen Identifies Regulators of MAPK as Suppressors of Liver Tumors in Mice." *Gastroenterology*. Dec 2016. PMID: 27956228 [Article]
- Wang D, Mou H, Li S et al. "Adenovirus-Mediated Somatic Genome Editing of Pten by CRISPR/Cas9 in Mouse Liver in Spite of Cas9-Specific Immune Responses." *Human Gene Therapy*. July 2015. PMID: 26086867 [Article]

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RESEARCH PRESENTATIONS

<i>Café Synthétique</i>	Cambridge, UK July 2017
Invited to speak to a mixed synthetic biology audience about our work in machine learning and CRISPR	
<i>CRISPR.Kitchen</i>	Munich, Germany March 2017
Invited to give two-hour lecture/workshop at TUM on CRISPR design and our research findings	
<i>Genome Editing: EMBL Mini-Symposium</i>	Heidelberg, Germany October 2016
Invited speaker at EMBL Heidelberg, discussed CRISPR screening dogmas and design considerations	
<i>Genome Engineering: The CRISPR-Cas Revolution</i>	Cold Spring Harbor, NY August 2016
Gave talk on CRISPR screening, presented poster on Guide Picker tool, conducted workshop	
<i>20th Annual UMass Medical School Research Retreat</i>	Amherst, MA October 2015
Edited/presented poster "Probing Tumor Suppressor Genes in Liver Tumors Using CRISPR Screen."	
<i>Massachusetts Statewide Undergraduate Research Conference</i>	Amherst, MA April 2013
Poster presentation through the Commonwealth Honors College at the University of Massachusetts	
<i>Northeast Undergraduate Research and Development Symposium (NURDS)</i>	Biddeford, ME March 2013
Poster presentation through the University of New England, won award for Best Poster	

AWARDS AND HONORS

Invited Guest Speaker — University of Massachusetts Microbiology and Film Departments	September 2015
Honors College Scholar with Departmental Honors and Distinction — University of Massachusetts	February 2014
Dean's List with Honors — University of Massachusetts	Spring 2012, Fall 2012/13
Accepted Student — Biology Talent Advancement Program (BioTAP)	2010-2011
Third Place Essayist — Massachusetts Society for Medical Research Annual Student Competition	Spring 2010

LABORATORY SKILLS

CRISPR screen, sgRNA design, sgRNA/shRNA cloning, qPCR, knockout generation, western blot, Gibson assembly, gel electrophoresis, Mini/Maxiprep, immunohistochemistry, mammalian cell transfection, mouse colony management/genotyping, PCR/methyl-sensitive PCR, Python (basic), public speaking, science writing, publication writing, grant writing, editing

SELECTED CLIPPINGS

"Cell-Based Therapy for Disease Using CRISPR"	March 1, 2017 DESKGEN.com
An overview of the ways CRISPR and genome editing have been used in a therapeutic context	
"Using RNAi and CRISPR to Interrogate the Genome"	December 16, 2016 DESKGEN.com
A comparison of CRISPR- and RNAi-based genetic screens and how they can be used cooperatively	
"Functional Validation of Noncoding DNA with CRISPR Tiling"	November 15, 2016 DESKGEN.com
How CRISPR can be used to saturate DNA to illuminate relationships between genotype and phenotype	
"Sequencing Options for CRISPR Genotyping"	October 4, 2016 Addgene
An exploration of biased and unbiased methods of validating on- and off-target edits in the model	
"Model Characterization Improves the CRISPR Experimental Process"	September 30, 2016 DESKGEN.com
Sequencing and annotating the experimental model genome allows for better, more accurate CRISPR design	
"CRISPR Applications in Oncology Research"	September 30, 2016 DESKGEN.com
CRISPR has been used in several translational and preclinical applications to help study and treat cancer	

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VOLUNTEER EXPERIENCE

Cambridge Churches Homeless Project

Team Leader/Overnight Volunteer for winter seasons with [CCHP](#)

Winters 2018, 2019

Crisis

Holiday volunteer at the East London [Crisis for Christmas](#) center.

December 2016

Connecticut Children's Medical Center

Juggler at annual [HIV Program for Children, Youth and Families](#) Christmas party

2003 - 2015

Amherst Cinema

Literacy educator through [See · Hear · Feel · Film program](#); taught students from Pioneer Valley

Fall 2012

University of Massachusetts Amherst

Volunteer Chair of [UMass Pre-Medical Society](#); co-created large-scale healthcare volunteer program

2010

National Honor Society

Academic tutoring, [Hartford Rescue Mission](#) volunteer through Walter Harrison Chapter of NHS

2008 - 2010

UConn Schools of Medicine and Dental Medicine

High school volunteer in the [Migrant Farm Worker Health Clinic](#); took vitals, worked with physicians

Summer 2008, 2009

REFERENCES

Please contact me directly for a full CV including professional references.