

**Søren Hough**  
 (860) 798-5268 [Cell]  
[shhough@gmail.com](mailto:shhough@gmail.com)

## EDUCATION

---

<b>University of Massachusetts Amherst</b>	Class of 2014	<i>College of Natural Sciences</i>
<b>Microbiology</b> <i>Bachelor of Science</i>	<b>Film Studies</b> <i>Certificate</i>	<b>Departmental Honors with Distinction</b> <i>Commonwealth Honors College</i>

## WORK EXPERIENCE

---

<b>Head Science Writer</b> — <i>Desktop Genetics</i> Wrote in-depth articles covering the use and applications of CRISPR technology in the lab and clinic	London, UK <i>June 2016 - Present</i>
<b>Research Associate</b> — <i>Laboratory of Wen Xue, PhD, at UMass Medical School</i> Used immunohistochemistry, sgRNA cloning and cell transfection to develop CRISPR therapeutics	Worcester, MA <i>December 2015 - Present</i>
<b>Research Laboratory Technician I</b> — <i>Laboratory 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 <i>Dec. 2014 - Nov. 2015</i>
<b>Honors Researcher</b> — <i>Laboratory 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 <i>Fall 2011 - Spring 2014</i>
<b>Student Researcher</b> — <i>Laboratory of Peg Riley, PhD, at the University of Massachusetts</i> Examined makeup of natural skin flora and the application of narrow-spectrum bacteriocins for burns	Amherst, MA <i>Spring 2011</i>
<b>First-Year Researcher</b> — <i>Laboratory of Jesse Mager, PhD, at the University of Massachusetts</i> One of 23 students in First-Year Research Experience; studied developmental epigenetics	Amherst, MA <i>Fall 2010</i>
<b>Research Intern</b> — <i>Laboratory of Gustavo Turecki, MD, PhD, at McGill University</i> Studied differential gene expression in suicide brains at Douglas Mental Health University Institute	Montréal, Québec, CA <i>Summer 2010</i>
<b>Research Apprentice</b> — <i>Laboratory of Henry Furneaux, PhD, at UConn School of Medicine</i> Researched and found putative link between viral microRNA and breast cancer	Farmington, CT <i>Summers 2008 - 2009</i>

## ACADEMIC PUBLICATION

---

Mou et al. “Genetic disruption of oncogenic Kras sensitizes lung cancer cells to Fas receptor-mediated apoptosis.” March 2017. [PNAS](#). PMID: 28320962

Hough SH, Kancleris K et al. “Guide Picker is a comprehensive design tool for visualizing and selecting guides for CRISPR experiments.” [BMC Bioinformatics](#). March 2017. PMID: 28288556

Song CQ, Li Y et al. “Genome-wide CRISPR Screen Identifies Regulators of MAPK as Suppressors of Liver Tumors in Mice.” [Gastroenterology](#). December 2016. PMID: 27956228

Hough SH, Ajetunmobi A et al. “Desktop Genetics.” [Personalized Medicine](#). November 2016.

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

Hough SH. “Using DNA Origami to Evaluate Motor Protein Binding Patterns.” Commonwealth Honors College at the University of Massachusetts Amherst. March 2014. [Honors Thesis]

**Søren Hough**  
 (860) 798-5268 [Cell]  
[shhough@gmail.com](mailto:shhough@gmail.com)  
**LinkedIn:** [linkedin.com/in/shhough](https://www.linkedin.com/in/shhough)

## RESEARCH PRESENTATIONS

---

- Genome Editing: EMBL Mini-Symposium* Heidelberg, Germany  
Invited speaker at EMBL Heidelberg, discussed CRISPR screening dogmas and design considerations  
*October 2016*
- Genome Engineering: The CRISPR-Cas Revolution* Cold Spring Harbor, NY  
Gave talk on CRISPR screening, presented poster on Guide Picker tool, conducted workshop  
*August 2016*
- 20th Annual UMass Medical School Research Retreat* Amherst, MA  
Edited/presented poster "Probing Tumor Suppressor Genes in Liver Tumors Using CRISPR Screen."  
*October 2015*
- Massachusetts Statewide Undergraduate Research Conference* Amherst, MA  
Poster presentation through the Commonwealth Honors College at the University of Massachusetts  
*April 2013*
- Northeast Undergraduate Research and Development Symposium (NURDS)* Biddeford, ME  
Poster presentation through the University of New England, won award for **Best Poster**  
*March 2013*

## 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

---

sgRNA Design, sgRNA Cloning, shRNA Cloning, qPCR, Western Blot, Test Digest, Gibson Assembly, Gel Electrophoresis, Mini/Maxiprep, Immunohistochemistry, Mammalian Cell Transfection, Mouse Colony Management/Genotyping, PCR/Methyl-Sensitive PCR, Science Writing, Publication Writing, Grant Writing, Editing

## SELECTED CLIPPINGS

---

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

**Søren Hough**

(860) 798-5268 [Cell]

[shhough@gmail.com](mailto:shhough@gmail.com)

**LinkedIn:** [linkedin.com/in/shhough](https://www.linkedin.com/in/shhough)