

# Teresa Easterbrooks

Winthrop, ME 04364 • (207) 446-8849 • teresa.easterbrooks@gmail.com

## EDUCATION

**University of Maine, Orono, ME** Aug. 2019-Present  
***PhD Student, Graduate School of Biomedical Science and Engineering***  
GPA: 3.918

**Simmons College, Boston, MA** May 2019  
***Bachelor of Science in Biology***  
Minor in Chemistry, Minor in Biostatistics  
Honors: Dean's List 4 semesters, Honors program all semesters  
Organizations: Sigma Xi, Mitchell Scholar  
GPA: 3.612

## GRADUATE COURSEWORK

Journal Club	Genetics
Biostatistics/Comp Bio	Biochemistry
Mouse Genome Modification: CRISPR/Cas9	Physiology
Mouse Genome Modification: Non-CRISPR Methods	

## RESEARCH EXPERIENCE

**University of Maine GSBSE**  
**Jackson Laboratory, Bar Harbor, ME** Jun 2020 - Present  
**Laboratory of Dr. Ron Korstanje**  
***Graduate Research***

- Utilizing the genetic diversity of the Diversity Outbred mouse population to study the process of senescence and the effects of senolytic drugs on aging mice, involving both tissue analysis and phenotype and lifespan study.
  - Performing immunofluorescence experiments and imaging
  - Assaying RNA expression using RNAScope protocols
  - Analyzing images qualitatively and quantitatively using ImageJ

**University of Maine, Orono, ME** Feb. 2020 – Jun 2020  
**Laboratory of Dr. Melissa Maginnis**  
***Graduate Rotation Research***

- Trained in cell culture techniques (passing and plating)
- Transitioned to remote work due to COVID-19 pandemic
  - Review primary and review literature on JC Polyomavirus and FPALM technique

**University of Maine, Orono, ME** Nov. 2019 - Feb. 2020  
**Laboratory of Dr. Jared Talbot**  
***Graduate Rotation Research***

- Developed a high-activity CRISPR targeting a *mylpfa* intron, which will enable the Talbot lab to generate zebrafish that replace zebrafish gene *mylpfa* with the human version *MYLPPF* in order to model a human muscle disease.
  - Utilized DNA sequence design and analysis program (Geneious) to design CRISPR guide RNA and analyze genomic DNA sequences.
  - Synthesized and injected guide RNA for CRISPR mutagenesis in zebrafish
  - Assayed mutagenesis using DNA melt-profile analysis

**Jackson Laboratory, Bar Harbor, ME** Aug. - Nov. 2019  
**Laboratory of Dr. Ron Korstanje**

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## ***Graduate Rotation Research***

- Compared protein and RNA expression and localization in mouse, bear, and tenrec samples to investigate a gene of interest in kidney regeneration in hibernating animals and developing kidneys in mice
  - Performed immunofluorescence experiments and imaging
  - Assayed RNA expression using RNAScope protocols
  - Analyzed images qualitatively and quantitatively using ImageJ

**Boston Children's Hospital, Boston, MA**

Sep. 2018-May 2019

**Laboratory of Dr. Elizabeth Engle, MD**

## ***Independent Lab Research (Course Credit)***

- Functionally characterize novel candidate genes and variants of unknown significance by generating novel fluorescent reporter fish lines, designing gene editing strategies, and making guide RNAs for candidate gene knockout in these reporter lines.
  - Research and review primary literature
  - Design guide RNA for CRISPR/Cas9 genome editing
  - Master zebrafish embryo microinjection
  - Perform RT-PCR and cloning procedures

## **PROFESSIONAL EXPERIENCE**

**Boston Children's Hospital, Boston, MA**

Dec 2017-May 2019

**Laboratory of Dr. Elizabeth Engle, MD**

## ***Research Assistant***

- Maintain lines of zebrafish through crossing and screening
- Perform molecular biology techniques including PCR, gel electrophoresis, and restriction digests

**Maine Department of Environmental Protection Biomonitoring Unit, Augusta, ME** May-Sep 2017

## ***Field Assistant***

- Collected algae, aquatic macroinvertebrate, and water samples to determine stream quality
- Transcribed field measurements into digital format for processing by statewide environmental groundwater monitoring database system
- Classified fish and macroinvertebrate species for stream quality models

**Simmons College Career Education Center, Boston, MA**

Feb. 2016 - Oct. 2017

## ***Peer Career Assistant***

- Created appointments and answered questions in person, via email, and by phone for student and alumnae/i career coaching
- Researched career-related news and information to create social media posts, handouts, and informational presentations to support students' career growth

**Friends of the Cobbossee Watershed, Augusta, ME**

Jul. 2014 - Aug. 2015

## ***Social Media Maven***

- Designed social media posts to encourage participation in summer programs
- Aided in converting membership spreadsheet into a new database system for streamlined management

## **LEADERSHIP AND VOLUNTEER EXPERIENCE**

**Simmons College Biology Liaison, Boston, MA**

Sep 2015 - May 2019

***Leadership:*** Vice President (2018-2019), Secretary (2017-2018), Outreach Chair (2016-2017)

**FIRST Robotics Competition Team 5471, Winthrop, ME**

Sep 2015 - Sep 2018

## ***Mentor***