

Monica C. (Mannings) Blatnik
1333 Boxwood Drive
Columbus, OH 43229
937-407-2567
Work email: blatnik.21@osu.edu
Personal email: manningasm16@gmail.com

EDUCATION

The Ohio State University, Graduate School of Arts and Sciences, Columbus, OH. Doctor of Philosophy, Molecular, Cellular and Developmental Biology **Spring 2023 (expected)**

Xavier University, Cincinnati, OH. Bachelor of Science, Biology, *Cum laude*. **May 2017**

SUPPLEMENTAL COURSEWORK & TRAINING

Zebrafish Development and Genetics Course, Marine Biological Laboratory **August 2018**

RESEARCH EXPERIENCE

Graduate Research

The Ohio State University, Department of Molecular Genetics **Spring 2018-present**
Graduate Research Fellow

Advisor: Dr. Sharon Amacher

Investigating factors involved in Pnrc2-dependent mRNA decay and translational regulation that promote oscillatory gene expression during vertebrate segmentation.

Undergraduate Research

The University of Florida-Shands Hospital **May 2016-July 2016**
REU Research Assistant

Advisor: Dr. Christopher Wendler

Investigated the effects of caffeine exposure on the expression of DNA methyltransferase genes, (*DNMT1*, *DNMT3a* and *DNMT3b*) in cardiomyocytes; the long-term goal is to understand the effects of alterations to adenosine signaling on gene expression and cardiac morphology and function during early development.

FUNDING

Graduate Funding

Pelotonia Predoctoral Fellowship **August 2020-August 2022**

Funding Agency: Pelotonia Fellowship Program

Role: Predoctoral fellow

Applied for and received Pelotonia Predoctoral Fellowship, a competitive, two-year research fellowship. Students are awarded funding with the aim of carrying out independent research projects working in a broad field of cancer research.

Dean's Graduate Enrichment Fellowship **August 2017-August 2018, August 2022-August 2023**

Funding Agency: The Ohio State University Graduate School

Role: Predoctoral fellow

Received two-year university fellowship (first year and dissertation year).

HONORS & AWARDS

Best 5th year Oral Presentation **May 2022**

Ohio State Molecular Genetics Department Falkenthal Colloquium

Best Oral Presentation **May 2022**

Ohio State Life Sciences Interdisciplinary Graduate Programs Annual Symposium

Ohio State College of Arts and Sciences Graduate Student Award for Mentoring Excellence. **April 2022**
Nominated for and received competitive award for excellence in mentoring undergraduate and/or new graduate students. Award is presented once per year to one graduate student in the College of Arts and Sciences.

Awarded 2nd place Poster Presentation **May 2021**
Ohio State Interdisciplinary Graduate Program Symposium (Virtual)

Awarded 1st place-Outstanding Poster Presentation-Graduate Student **June 2018**
Midwest Zebrafish Meeting, Lexington KY

Zebrafish Development and Genetics Course Scholarship and Travel Award **May 2018**
Received full scholarship covering travel and tuition to attend the intensive two-week Zebrafish Development and Genetics Course at the Marine Biological Laboratory in Woods Hole, MA.

PEER-REVIEWED PUBLICATIONS

Monica Blatnik, Thomas Gallagher, Sharon Amacher. Keeping development on time: insights into post-transcriptional mechanisms driving oscillatory gene expression during vertebrate segmentation. *WIREs RNA*. July 19, 2022. (Invited)

Kiel Tietz, Thomas Gallagher, **Monica Mannings**, Zachary Morrow, Nicolas Derr, Sharon Amacher. Pumilio Response and AU-rich Elements Drive Rapid Decay of Pnrc2-regulated Cyclic Gene Transcripts. *Developmental Biology*. April 1, 2020.

TEACHING & MENTORING

The Ohio State University-Graduate Teaching Assistant

Molecular Genetics (MOLGEN 4606): Dr. Helen Chamberlin **Spring 2019**
Worked through practice problems and facilitated group discussions during weekly recitation; provided guidance and assistance to students during weekly office hours; proctored midterm and final exams; graded exams

General Genetics (MOLGEN 4500): Dr. Gregory Booton; Dr. Michael Weinstein; Dr. Harald Vaessin **Fall 2018**
Provided guidance and assistance to students during weekly office hours; proctored midterm and final exams; graded exams

Undergraduate Student Mentoring

Zixi (Cecilia) Long (undergraduate OSU Molecular Genetics honors student mentee) **Spring 2021-Spring 2022**
Developed zebrafish CRISPR mutant and characterized mutant phenotypes; accepted and participated in the Ohio State RNA Center REU research fellowship program; prepared and defended an honors thesis for research project and graduated with honors in the Molecular Genetics program; currently a graduate student in the Ohio State Molecular, Cellular, and Developmental Biology PhD program

Regan Webber (undergraduate mentee) **Spring 2020-Fall 2021**
Characterized skeletal phenotypes in mutant zebrafish larvae; awarded Molecular Genetics Elizabeth Wagner Scholarship

Delia Calderon (co-mentored, REU undergraduate research fellow) **May-July 2019**
Characterized zebrafish mutant phenotypes; currently a PhD student in the Ohio State Molecular, Cellular, and Developmental Biology PhD program

Postbaccalaureate mentoring

The Ohio State University Discovery PREP postbaccalaureate students

Fall 2018-Spring 2020

Graduate Student Mentoring

Clare Austin (Molecular Genetics graduate student)

Fall 2022

Characterized zebrafish mutant phenotypes by in situ hybridization and qPCR for an 8-week lab rotation project

ORAL PRESENTATIONS

Blatnik, MC. Ohio State Molecular, Cellular, and Developmental Biology 3-Minute Thesis presentation. October 2022

Blatnik MC, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational control mechanisms promote oscillatory gene expression during vertebrate segmentation. Ohio State Molecular Genetics Department Falkenthal Colloquium. May 2022. Columbus, OH. *Awarded Best Oral presentation.*

Blatnik MC, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational control mechanisms promote oscillatory gene expression during vertebrate segmentation. Ohio State Life Sciences Interdisciplinary Graduate Programs Annual Symposium. May 2022. Columbus, OH. *Awarded Best Oral presentation.*

Blatnik MC, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational control mechanisms promote oscillatory gene expression during vertebrate segmentation. Midwest Zebrafish Conference. May 2022. Columbus, OH.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational control mechanisms promote oscillatory gene expression during vertebrate segmentation. Rustbelt RNA Meeting (Virtual). September 2021.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational regulatory factors promote oscillatory gene expression during vertebrate segmentation. Ohio State University-Nationwide Children's Hospital Center for Muscle Health and Neuromuscular Disorders Annual Trainee Poster Day (Virtual). November 2020.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational regulatory factors promote oscillatory gene expression during vertebrate segmentation. OSU Biochemistry and Pharmacology Research in Progress Seminar (Virtual). November 2020.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational control mechanisms promote oscillatory gene expression during vertebrate segmentation. Rustbelt RNA Meeting (Virtual). October 2020.

Mannings, MC. Ohio State Molecular, Cellular, and Developmental Biology 3-Minute Thesis presentation. November 2019.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Pnrc2 promotes oscillatory transcript decay during vertebrate segmentation. Society for Developmental Biology Midwest Regional Meeting. September 2019. Cleveland, OH.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Does Pnrc2 promote oscillatory mRNA decay independent of translational regulation of oscillatory protein? 8th annual Midwest Zebrafish Meeting. June 2019. Lexington, KY.

Mannings MC and Amacher SL. Zebrafish Development and Genetics Course. August 2018. Woods Hole, MA.-3 minute presentation

POSTER PRESENTATIONS

Blatnik MC, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational control mechanisms promote oscillatory gene expression during vertebrate segmentation. Ohio State University-Nationwide Children's Hospital Center for Muscle Health and Neuromuscular Disorders Annual Trainee Poster Day. November 2022. Columbus, OH.

Blatnik MC, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational control mechanisms promote oscillatory gene expression during vertebrate segmentation. The Ohio State Center for RNA Biology Annual Symposium May 2022. Columbus, OH.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational regulatory factors promote oscillatory gene expression during vertebrate segmentation. 85th Cold Spring Harbor Symposium on Quantitative Biology: Biological Time Keeping Meeting (Virtual). June 2021.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational regulatory factors promote oscillatory gene expression during vertebrate segmentation. Ohio State Interdisciplinary Graduate Program Symposium (Virtual). May 2021. **Awarded 2nd place-Poster Presentation.**

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational regulatory factors promote oscillatory gene expression during vertebrate segmentation. Society for Developmental Biology Meeting (Virtual). July 2020.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Pnrc2-dependent mRNA decay and translational regulatory factors promote oscillatory gene expression during vertebrate segmentation. Ohio State University-Nationwide Children's Hospital Center for Muscle Health and Neuromuscular Disorders Annual Trainee Poster Day. November 2019. Columbus, OH.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Does Pnrc2 promote oscillatory mRNA decay independent of translational regulation of oscillatory protein? Rustbelt RNA Meeting. October 2019. Cleveland, OH

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Does Pnrc2 promote oscillatory mRNA decay independent of translational regulation of oscillatory protein? Midwest Zebrafish Meeting. June 2019. Lexington, KY. **Awarded 1st place-Outstanding Poster Presentation-Graduate Student.**

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Does Pnrc2 promote oscillatory mRNA decay independent of translational regulation of oscillatory protein? The Ohio State Center for RNA Biology Annual Symposium May 2019. Columbus, OH.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Pnrc2 regulates 3'UTR-mediated decay of cyclic transcripts during somitogenesis. Ohio State University-Nationwide Children's Hospital Center for Muscle Health and Neuromuscular Disorders Annual Trainee Poster Day. November 2018. Columbus, OH.

Mannings MC, Tietz KT, Gallagher TL, Amacher SL. Pnrc2 regulates 3'UTR-mediated decay of cyclic transcripts during somitogenesis. Zebrafish Development and Genetics Course. August 2018. Woods Hole, MA.

LEADERSHIP & SERVICE

Student Co-organizer for the Midwest Zebrafish Conference (Ohio State University)

Spring 2022

Assisted in organizing the 2022 Midwest Zebrafish Conference.

Zebrafish Research Student Organization, President (Ohio State University)

Fall 2021-present

Organize social and networking events for graduate and undergraduate student members working in zebrafish research labs at Ohio State.

International Zebrafish Society Diversity, Equity and Inclusion Committee, Member (International Zebrafish Society). January 2021-present

Serve as graduate student representative on the International Zebrafish Society Diversity, Equity and Inclusion committee to help formulate concrete strategies to enhance diversity and inclusion in the international community of zebrafish researchers. Prepare for and attend committee and subcommittee meetings.

Molecular, Cellular, and Developmental Biology, Graduate Student Organization, President (Ohio State University) Fall 2020-Fall 2022

Oversee graduate student committees, hold organizational meetings, and serve as a representative for MCDB graduate students at Ohio State. Hosted monthly meetings and maintained regular correspondence with GSO members outside of meetings.

Molecular, Cellular, and Developmental Biology, Graduate Student Organization, Volunteer & Community Outreach Chair (Ohio State University) Fall 2019-Fall 2020

Collaborated with graduate student committee chairs to organize outreach events and food/school supplies drives to serve middle school students from predominantly underrepresented minority groups in the Columbus Public School district. Organized and attended two outreach events per year; helped lead 2 days of in-school activities per outreach event.

Molecular, Cellular, and Developmental Biology, Graduate Student Organization, Interdisciplinary Graduate Program Symposium Chair (Ohio State University) Fall 2018-Fall 2019

Organized speakers for keynote and plenary sessions for the annual Interdisciplinary Graduate Program Symposium at Ohio State University.

VOLUNTEER & OUTREACH

- Volunteered to help implement Columbus chapter of Project BioEYES, a K-12 science outreach program
- Volunteered with genetics activities at Ohio State WestFest Science and Technology Festival
- Volunteered at the Ohio State Molecular Genetics Department booth at COSI Science Day
- Volunteered as a judge for the Ohio High School State Science Fair

PROFESSIONAL DEVELOPMENT

- Completed BioScience Writers fellowship writing workshop
- Completed Speaker Coaching Program with Articulation, Inc.

SOCIETY MEMBERSHIPS

- Society for Developmental Biology
- International Zebrafish Society
- RNA Society
- Genetics Society of America