

# Abby L. Manning

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Rochester, New York 14642 • [abby\\_manning@urmc.rochester.edu](mailto:abby_manning@urmc.rochester.edu)

## EDUCATION

### University of Rochester School of Medicine and Dentistry

Biophysics, Structural and Computational Biology (BSCB) PhD Candidate August 2022 - Current  
Master's Degree in Biophysics, Structural and Computational Biology (BSCB) September 2024  
*Best Student Seminar Spring 2024, Graduates Working in Science Travel Award Spring 2025*

### Nazareth University

B.S. in Biochemistry, May 2022 GPA: 3.985/4.0 *Dean's List* (Completed in Three Years)  
*The American Institute of Chemists Biochemistry Award, The Sister Therese M. Lang Biochemistry Award, Alice Taylor Gorham Award, ACS Travel Grant 2022, The Honor Society of Phi Lambda Upsilon, The Honor Society of Phi Kappa Phi, National Honor Society*

## PUBLICATIONS

### Manuscript in preparation

Title: "Structural Insights into snRNA Biogenesis"

Author(s): **Abby L. Manning**<sup>1</sup>, Ji Huang<sup>2</sup>, Kai-Lieh Huang<sup>1</sup>, Liang Tong<sup>2</sup>, Eric J. Wagner<sup>1\*</sup>

### Under final review at Nature Communications

Title: "The Disordered Region of Human Poly(A) Polymerase Controls mRNA Polyadenylation"

Author(s): Marah Saad<sup>1†</sup>, Elise Delaforge<sup>2†</sup>, **Abby Manning**<sup>3†</sup>, Guillaume Hoffmann<sup>1</sup>, Aiswarya Balakrishnan<sup>3</sup>, Francesco S. Ielasi<sup>1</sup>, Kai-Lieh Huang<sup>3</sup>, Eric J. Wagner\*, Malene Ringkjøbing Jensen<sup>2\*</sup> and Andrés Palencia<sup>1\*</sup>

The Journal of Chemical Education Manuscript ID: ed-2022-00757z.R3

Title: "The Determination of an Unknown Aryl Amine Reactant Using Microwave Assisted Acetanilide Synthesis and Thin-Layer Chromatography: A Multi-Outcome, Guided Inquiry-Based Organic Chemistry Laboratory Experiment."

Author(s): **Manning, Abby**; Roos, Bryanna; Charlebois, Amber; Hutchinson-Anderson, Kelly ; Tajc, Stephen\*, **2023**

## FUNDING

**NIH NIGM T32 in Cellular, Biochemical and Molecular Sciences Trainee**, URM (2024-2025)

**Elon Huntington Hooker Fellowship**, URM (2026-2027)

## SELECTED PRESENTATIONS

**To attend: ASBMB Control of transcription by chromatin dynamics and RNA polymerase activity**, Alexandria, VA (October 2026)

*Poster* - "Structural interfaces connect ICE2 with the cap-binding complex and Integrator."

Author(s): **Abby L. Manning**, Ji Huang, Kai-Lieh Huang, Liang Tong, Eric J. Wagner\*

**2026 Upstate NY RNA Symposium**, Albany, NY (March 2026)

*Trainee Talk* - "Characterization and function of a novel Integrator-associated complex."

Author(s): **Abby L. Manning**, Kai-Lieh Huang, Liang Tong, Eric J. Wagner\*

**2026 T32 Retreat**, Rochester, NY (March 2026)

*Trainee Talk* - "Characterization and function of a novel Integrator-associated complex."

Author(s): **Abby L. Manning**, Kai-Lieh Huang, Liang Tong, Eric J. Wagner\*

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**WNYSBC Inaugural Summer Symposium**, Buffalo, NY (August 2025)

*Trainee Talk* - "Characterization and function of a novel Integrator-associated complex."

Author(s): **Abby L. Manning**, Kai-Lieh Huang, Liang Tong, Eric J. Wagner\*

**Mechanisms of Eukaryotic Transcription**, Cold Spring Harbor, NY (August 2025)

*Poster* - "Characterization and function of a novel Integrator-associated complex."

Author(s): **Abby L. Manning**, Kai-Lieh Huang, Liang Tong, Eric J. Wagner\*

**RNA Society Meeting**, Edinburgh, Scotland (2024)

*Poster* - "Regulation of transcription machinery by phosphorylation."

Author(s): **Abby L. Manning**, Kai-Lieh Huang, Liang Tong, Eric J. Wagner\*

**ACS Northeastern Regional Meeting**, Rochester, NY (2022)

*Panelist* - Graduate School Seminar: A seminar/Q&A for undergraduate students to connect with current graduate students and explore their options for graduate schools.

**Spring ACS National Meeting**, San Diego, CA (2022)

*Poster* - "Exploration of the interaction between DNA/RNA and Cresyl Violet."

Author(s): Megan Griffin, **Abby Manning**, Jessica Granchelli, & Amber F. Charlebois, Ph.D.\*

**Undergraduate Research Symposium**, Rochester, NY (2022)

*Oral Presentation* - "Exploration of the interaction between DNA/RNA and Cresyl Violet."

Author(s): **Abby Manning**, Megan Griffin, Jessica Granchelli, & Amber F. Charlebois, Ph.D.\*

## RESEARCH EXPERIENCE

**University of Rochester SMD**, Rochester, NY (2022-Current)

*Graduate Student* - Working in the lab of **Eric J. Wagner, Ph.D.**, to study transcription and regulation of transcription machinery. This work uses a blend of classical biochemical and molecular biological techniques, coupled with an extensive array of next-generation sequencing approaches and functional genomics. My current research focuses on structurally, biochemically, and functionally characterizing a novel transcription complex.

**University of Rochester SMD**, Rochester, NY (2022-2023)

*Laboratory Rotation Period* - 10-week training periods rotating in each of the following laboratories:

**Benjamin L. Miller, Ph.D.** Project: Development of a human tissue on a chip system.

**Clara L. Kielkopf, Ph.D.** Project: Pre-mRNA splicing factors in human genetic diseases.

**Eric J. Wagner, Ph.D.** Project: Characterization of Cleavage and Polyadenylation protein Nudt21.

**Nazareth University**, Rochester, NY (2020-2022)

*Research Student* - Working in a chemistry research laboratory under **Amber Charlebois, Ph.D.** Research in the exploration of the interaction between DNA/RNA and Cresyl Violet. Applies many general chemistry laboratory techniques, with an emphasis on Gel Electrophoresis and UV-Vis Spectroscopy. Presented for Spring 2020 and 2021 Nazareth University CARS, Spring Regional 2021, and National 2022 ACS Meetings.

**Nazareth University**, Rochester, NY (2021)

*Research Student* - Working in a chemistry research laboratory under **Stephen Tajc, Ph.D.**, and **Amber Charlebois, Ph.D.** Research in the creation of an unknown aryl amine reaction Organic Chemistry laboratory experiment. Applies many general chemistry laboratory techniques, with emphasis on Organic synthesis, NMR, and IR. Paper publication.

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## RELEVANT EXPERIENCE

### **Nazareth University, Rochester, NY (2025-Current)**

*Adjunct Professor* - CHM140L: General Chemistry Lab, CHM221L: Foundations of Organic and Biochemistry Laboratory

### **University of Rochester SMD, Rochester, NY (2023-Current)**

*Teaching Assistant* - BCH308: Biochemistry Laboratory (Spring 2024)

*Peer Training* - Working with and training Undergraduate and Graduate Rotation Students

### **Nazareth University Chemistry Department, Rochester, NY (2020-2022)**

*Teaching Assistant* - Biochemistry, General Chemistry, Organic Chemistry (2021-2022)

*Chemistry Laboratory Worker* - Maintaining various laboratories for the chemistry department (2020-2022)

### **Nazareth University Science Camp, Rochester, NY (2021)**

*Experiment Coordinator and Camp Counselor* - Preparing science experiments for a 6-week children's summer camp. Hands-on teaching with children ages 5-13.

## LABORATORY SKILLS

Western Blotting, Cell Culture, Cloning and Mutagenesis, Immunoprecipitation, Kinase assays, rt-qPCR, Mass Spectrometry sample preparation and analysis, RNA-sequencing, Cell line creation, Microfluidics, <sup>1</sup>H, <sup>13</sup>C NMR Spectroscopy, IR and UV Spectroscopy, Standard chemical laboratory techniques, Gel Electrophoresis, TLC, accurate record keeping in a laboratory notebook, protocol development and optimization, laboratory management and maintenance

## BUSINESS EXPERIENCE

### **TJMaxx, Liverpool, NY (2018-2020)**

*Sales Associate* - A customer service representative who filled many roles and tasks. Experience in stocking, recovery, jewelry associate, and cashier. Worked in a fast-paced environment, completing a variety of tasks.

## EXTRACURRICULAR ACTIVITIES

**Graduate Student Society President** (Current), **Graduate Student Society** (2023 Secretary - 2025 Vice President) **UR Thinkers President** (2024-2026), **SMD Entrepreneurs** (2023), **Nazareth Science Club Treasurer** (2019-2022), **Esports Team Manager** (2020-2022), **Science Olympiad** (2018-2019), **Yearbook** (2012-2019), **Model United Nations** (2017-2018)

## COMMUNITY SERVICE

**Rochester Young Scientists Club** (2023-2024), **FCCLA**, Family Career Community Leaders of America (2017-2019), **Charles W. Baker Key Club** (2017-2019), **The Honor Society of Phi Kappa Phi** (2020-2022)