

Megan M. Korn

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EDUCATION

University of Michigan
Chemistry PhD Student

Ann Arbor, MI
Aug. 2020 – Present

Emory University

Chemistry Bachelor of Science, Summa Cum Laude and Mathematics Minor
Thesis Advisor: Prof. Jennifer Heemstra

Atlanta, GA
Aug. 2016 – May 2020

Thesis Title: Synthesis of a Click-Compatible Phenylacrylamide to Probe A-to-I RNA Editing

Relevant Courses: Organic Chemistry I & II with Lab, Organometallic Chemistry, Biochemistry, Physical Chemistry I & II with Lab, Analytical Chemistry with Lab, Inorganic Chemistry, Ordinary & Partial Differential Equations, Linear Algebra, and Multivariable Calculus

Lehigh University

Relevant Courses: Calculus-Based Physics I & II with Lab

Bethlehem, PA
May 2017 – Aug. 2017

RESEARCH EXPERIENCE

Acrylamide and Carbodiimide Derivatives for Chemical Profiling of the Epitranscriptome

Heemstra Lab, Emory University

Atlanta, GA
Aug. 2018 – Apr. 2020

- Designed and conducted organic syntheses of an acrylamide derivative and carbodiimide derivatives for inosine base and pseudouridine base labeling for a click-compatible system
- Obtained skills in gel electrophoresis, nanodrop, gel imaging, and ethanol precipitation of oligonucleotides
- Characterized small molecules using NMR and mass spectrometry
- Presented findings in formalized talks during group meetings
- Designed and presented a poster of the project for the CHEM 499RW course
- Compiled findings into an honors thesis and publicly defended the work

Summer Undergraduate Research at Emory (SURE) Fellow

Heemstra Lab, Emory University

Atlanta, GA
May 2019 – Aug. 2019

- Selected from a highly competitive field of applicants
- Designed an independent research project and presented findings at a research symposium
- Participated in weekly professional development and research ethics seminars

Synthesis of Threose Nucleic Acid Monomers

Heemstra Lab, Emory University

Atlanta, GA
Jan. 2018 – Feb. 2019

- Conducted complete organic synthesis of adenine phosphoramidite monomer; obtained skills of column chromatography, NMR spectroscopy, mass spectrometry, prep-TLC chromatography
- Presented findings in formalized talks during group meetings

PRESENTATIONS

Megan Korn, Steve Knutson, and Jennifer Heemstra. Acrylamide and Carbodiimide Derivatives for Chemical Profiling of the Epitranscriptome. Gordon Research Conference, Nucleosides, Nucleotides, and Oligonucleotides. Salve Regina University, RI, June 22nd-28th, 2019. (*Poster Presentation*)

Megan Korn, Steve Knutson, and Jennifer Heemstra. Acrylamide and Carbodiimide Derivatives for Chemical Profiling of the Epitranscriptome. SURE Research Symposium. Emory University, GA, August 1st, 2019. (*Poster Presentation*)

PUBLICATIONS

Knutson, S. D., Sanford, A. A., Swenson, C. S., **Korn, M. M.**, Manuel, B. A., & Heemstra, J. M. (2020). Thermoreversible Control of Nucleic Acid Structure and Function with Glyoxal Caging. *Journal of the American Chemical Society*, jacs.0c08996. <https://doi.org/10.1021/jacs.0c08996>

Knutson, S. D., **Korn, M. M.**, Johnson, R. P., Monteleone, L. R., Dailey, D. M., Swenson, C. S., ... Heemstra, J. M. (2020). Chemical Profiling of A-to-I RNA Editing Using a Click-Compatible Phenylacrylamide. *Chemistry – A European Journal*, 26(44), 9874–9878. <https://doi.org/10.1002/chem.202001667>

AWARDS

- Undergraduate Research Program Conference Travel Grant, Emory University Jun. 2019
- Dean's List, Emory University May 2017 & May 2018

LEADERSHIP & COMMUNITY INVOLVEMENT

Emory Running Club, Co-President Aug. 2018 – Apr. 2020

- Organized and led group runs four times a week, culminating in four off-campus races per semester
- Improved club-wide communication for 140 members
- Developed relationships with Atlanta Track Club, Big Peach Running Stores, and Fleet Feet Running Stores
- Organized and conducted an on-campus race that benefitted the Best Buddies club—an organization that seeks to improve the lives of those living with intellectual and developmental disabilities

Organic Chemistry I & II Studio Session, Session Leader Sep. 2017 – May 2018

- Met once a month with 10 organic chemistry students to lead them through problem sets, including mechanisms, synthesis, and kinetics questions
- Fielded questions and reviewed in-class material
- Developed and fostered a collaborative learning environment by allowing students to drive the topics of each session

ADDITIONAL INFORMATION

Skills: German (Intermediate), Basic website design, Basic podcasting, Proficiency in Audacity, Proficiency in Tableau, Proficiency in MATLAB, ImageJ, and PyMOL.

Interests: Long- distance running, Hiking, Backpacking, Birding, Ecology

