

Kincaid S. Rowbotham

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Education

St. Jude Graduate School of Biomedical Sciences , Biomedical Sciences	Memphis, TN
• Training in the Department of Structural Biology under Dr. M. Madan Babu	2023 – present
• Completed all required coursework and passed qualifying exam	
University of North Dakota , Biology	Grand Forks, ND
• Transferred to St. Jude Graduate School to pursue structure-focused computational biology	2022 – 2023
University of North Dakota , Molecular and Integrative Biology (Honors)	Grand Forks, ND
• UND Honors College	2018 – 2022
• First-generation college student	

Experience

Babu Lab, Department of Structural Biology , PhD Candidate	St. Jude Children's Research Hospital, Memphis, TN
Investigating influenza A virus adaptation using structural and evolutionary frameworks.	2023 – present
Research focuses on modeling Baloxavir resistance in PA protein and predicting N-glycosylation motif emergence on hemagglutinin.	3 years
• Contributed to Science Advances publication on Baloxavir efficacy against H5N1	
• Protein-ligand interaction modeling using induced-fit docking	
• Structural and evolutionary analysis of viral glycosylation	
Yu Lab, Computational Biology Department , Graduate Intern	St. Jude Children's Research Hospital, Memphis, TN
Summer rotation in computational biology.	2023 – 2023
	1 year
Wang Lab , Undergraduate Research Assistant	University of North Dakota, Grand Forks, ND
Applied machine learning and proteomics to investigate early molecular signals of Alzheimer's disease. First undergraduate to join the lab upon its founding in 2020.	2020 – 2023
• Developed predictive neural network models using proteomic data	3 years
• Built pipelines for integrating biological data using Python and R	
• Contributed to SMAP proteogenomic sample-matching tool	
• Made JUMP mass spectrometry tool-suite cross-platform	
Milavetz Lab , Undergraduate Researcher	University of North Dakota, Grand Forks, ND
Studied chromatin organization and transcriptional regulation in Simian Virus 40 (SV40) infection.	2019 – 2022
• Co-authored 3 peer-reviewed publications	3 years
• Developed FS-Seq method for identifying histone positioning	
• Built NGS processing pipeline using bash and Python	
• Mentored undergraduate students (Brienna Hanson, Alexandria Rios Diaz)	

Volunteer

UND Biology Club , Founder & President	University of North Dakota, Grand Forks, ND
Founded and led campus biology club growing to 71 members. Created a hub for student mentoring and organized faculty seminars.	2020 – 2022
• Organized North Dakota's first state-wide Datathon with sponsorships from Sanford Health and ND EPSCoR	
• Led workshops on Python coding and machine learning fundamentals	
• Hosted Skaggs School of Pharmacy and Xcel Energy STEM initiative	

National Scholarship Peer Advisors (NSPA), Founding Member & Administrator
Implemented systems to connect students with fellowship opportunities and mentors.
• Assisted students through national scholarship applications
• Constructed timelines, routine meetings, and resources for applicants

University of North Dakota,
Grand Forks, ND
2020 – 2022

Milavetz Lab, Undergraduate Mentor
Taught lab techniques and etiquette to peer undergraduate students (Brienna Hanson,
Alexandria Rios Diaz).

University of North Dakota,
Grand Forks, ND
2020 – 2022

Awards

ASPET-SURF Fellowship 2021
Summer Undergraduate Research Fellowship supporting research in the Milavetz Lab.
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ND-EPSCoR Undergraduate Research Grant 2020
Competitive research grant supporting undergraduate research projects.
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NSF S-STEM US MASTERS Scholarship 2019
Four-year scholarship supporting STEM students.
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UND Honors College 2018
Membership in the UND Honors College throughout undergraduate career.
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Skills

Programming

Machine Learning

Structural Biology

Molecular Biology

Languages

English

Native speaker

Interests

Research